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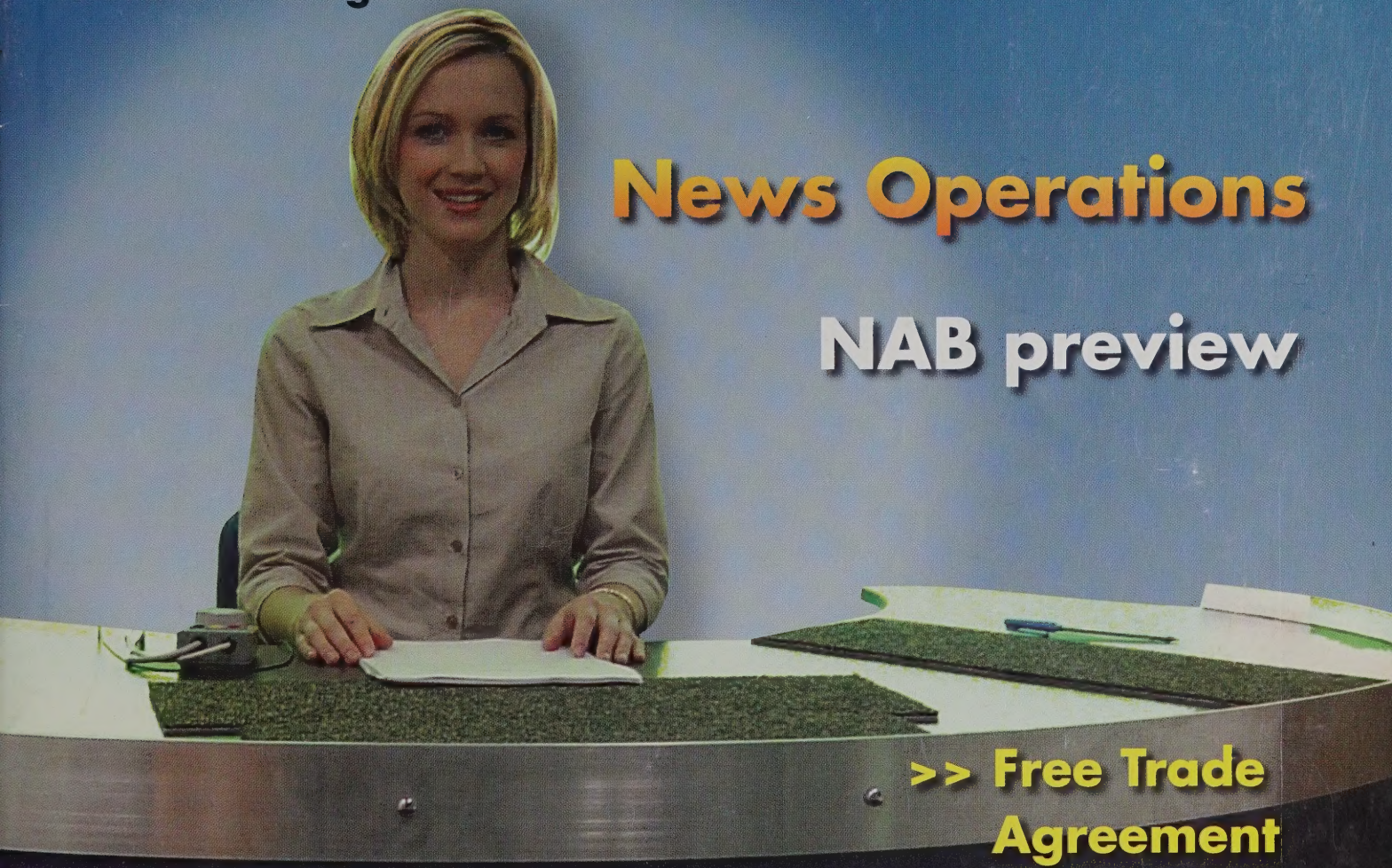
BROADCASTPAPERS

# content + technology

MAGAZINE

>Media>Management>Production>Distribution



## News Operations

## NAB preview

>> Free Trade Agreement

>>Visual Effects

>>Transmission

>>Disc Based Acquisition

>>Test & Measurement

ISSN 1448-9554

## There's a purpose to our passion

At Thomson our passion is your product, whether it's sports, news, live, or dramatic production. In fact, we're downright fanatical about it. From engineering to field testing to support we put the world's best tools at your fingertips.

Our line of Grass Valley™ products is one of the most trusted in broadcasting. And with good reason. With 19 technical Emmy® awards, our worldwide research and development effort is unparalleled. And we are constantly working directly with customers to create features and products that meet their current needs and grow with them in the future.

It's why you'll find us in some of the world's largest multi-format broadcast facilities. In fact, from major sporting championships to high-profile commercials to the most glamorous award ceremonies to all-digital newscasts seen by millions, the world's media leaders have chosen Grass Valley products from Thomson because they won't settle for less.

## Setting standards on principle

Every HD product with our name on it adheres to a common set of principles:

- It must support multiple formats, or be truly format and resolution independant
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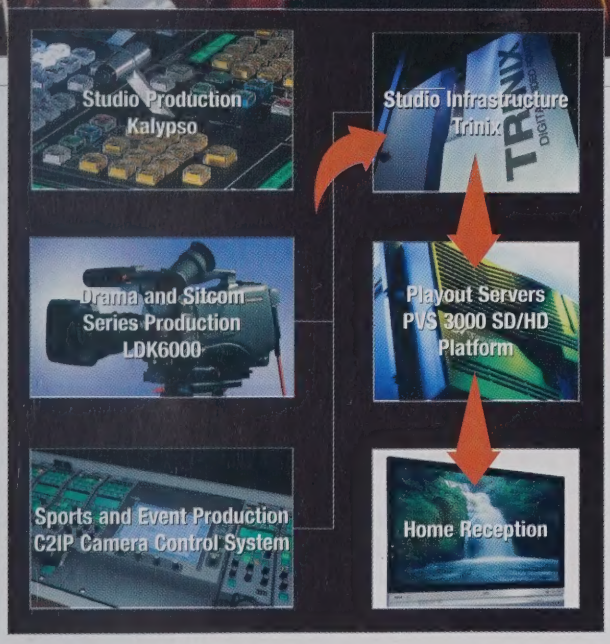
Wherever you are in your digital transition, we have the tools, talent, and expertise to make it a smooth one. You can choose an SD switcher, like the Kalypso™ Duo Video Production Center, and upgrade it via software to HD whenever you're ready. Or get your hands on a camera like the LDK 6000 mk II WorldCam that lets you capture true progressive HD images, natively, in multiple formats and frame rates, using three 9.2-million pixel HD-DPM+™ CCDs for the highest quality images available.

Media leaders worldwide are leveraging Grass Valley HD solutions because they want to bring their "A" game. They know that if they want to compete with the best content possible, it's imperative to demand the best.

SD HD




## Multi-format and future-proof

Our strategy is to develop products that can meet your SD needs today, while protecting the path to your HD future. Need proof? Just take a look at our products, which offer the industry's broadest support for true multi-format switchability and future-proof designs. They include:

- New Kayak™ HD 1 M/E digital switcher
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- New HD and SD additions to the Kameleon™ Media Processing System modular product line
- LDK 5000 camera, field upgradeable from SD to HD
- LDK 6000 mk II WorldCam, a highly popular choice for multi-format production
- PVS 3000 Profile® XP Media Platform SD/HD server
- Kalypso Video Production Center and XtenDD switcher lines
- Trinix™ SD/HD digital video router
- Concerto™ Series multi-format video and audio router
- Apex digital audio router, the highest density and most reliable for large-scale infrastructures

## The de facto standard for mobile production

Today, our Grass Valley line of products is emerging as the de facto standard for mobile production. Over the last year, more mobile production companies in the U.S. and Europe standardized on our equipment than any other manufacturer. Some of them include:

New HD and SD Modules for the Kameleon Media Processing System help you transistion your facility to HD.

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- Cinevideogroep
- Colorado Studios
- Dome Productions
- Media Mobil Gmbh
- National Mobile Television
- NEP Supershooters
- New Century Productions
- Trio Video
- Visions

## Committed to winning

After introducing more than 25 new products last year, you'd think we'd call a time out. But we won't wait for the next big thing. Not only are we committed to being at the forefront of the industry, but we want to ensure that our customers can rely on us to provide high-performance, cost-effective, scalable, multi-format solutions.

Our goal is for you to win. And to win, you need a partner, not just a technology company. Regardless of how you develop or deliver your content, we have solutions that fit the way you work.

And when you buy Grass Valley products, you get more than world-renowned quality. You hire the most knowledgeable support team in the industry—highly trained professionals who can support you, from installing new equipment, training your technicians or simply reducing long-term maintenance costs. In other words, we're on your team.

To find out more, see us at **www.thomsongrassvalley.com**

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c+t

# Editorial

## COME ON JOHNNY, GIVE US SOME SUGAR!

**WELCOME TO** the second issue of Content+Technology. As you can see from some of the communication below, we had a fantastic response to our launch edition (and thanks to Quantel UK for the Rugby wit). Along with our online technical library www.broadcastpapers.com and news feeds on the SMPTE Australia Section web site (www.smpte.org.au), we hope to continue to keep all our readers informed about industry developments and provide professional resources that they use again and again.

In this issue, with the assistance of Gilbert + Tobin Lawyers, we examine a number of regulatory issues facing those who produce and deliver content, including the thorny issue of the Australia-United States Free Trade Agreement. At the time of writing, Trade Minister Mark Vaile had postponed release of details of the deal citing technical issues still to be finalised.

There have been conflicting statements from US and Australian representatives regarding the impact of the FTA on Australian content quotas - with enough spin to make a Frisbee dizzy.

If the end result of this trade agreement, as industry figures such as SPAA's Geoff Brown claim (see story page 9), is a retention of current ANALOGUE quotas, but open slather on future digital and new media delivery platforms, many of us may as well pack up and go home.

On top of a regulatory history that includes mandatory high definition, simulcasting, aggregation and aggravation, any environment that provides further disincentives to develop local content will have impacts that are likely to filter down through the entire industry. If local production is eroded, it will lead to a downsizing in the industry which will limit scope for developing the skills and facilities needed to keep the Australian industry competitive on a global level.

So, if this agreement means the Federal Government cannot regulate local content in the future, it must provide alternative incentives, a la the sugar industry, to ensure the long term health of the industry – it's the difference between keeping Australian production sweet or letting it take a caning.

*Regards*
*Phil Sandberg*
*Editor*
*Tel: +61-(0)2-9332 2221*
*Email: papers@broadcastpapers.com*

# Feedback

The following correspondence has been edited.
Send your comment to papers@broadcastpapers.com

Congratulations on your first issue of the magazine. It looks great, it seems to be targeted well, and the final acid test of any first issue - it's got my name in it :-)

Also, of course, Atlab (once) and another mention for FIBRE (plus pics!). You're absolutely on the right track.

*- Dominic Case, Group Technology & Services Manager, The Atlab Group*

I write to congratulate you on an excellent launch edition – and not just because it has my picture in it!! I look forward to future editions. A good collection of broadcast information and news . Well done.

*- Clive Morton, Broadcast Australia*

I want to thank you for including me on your initial send for Broadcastpaper's Content+Technology magazine. It is great and I think you have a winner here as well. It has a good mix.

*- Warwick Teale, Hong Kong*

Congratulations Phil and Hugh on the birth of your babies!!! What a read a really good magazine you must both be very proud parents. And, Hugh what a beautiful little girl. Phil - I loved the introduction.

*- Nick Fitzgerald, Digital Rapids*

Hi guys, just got a copy of your new magazine in the mail. Looks really sharp. Great stuff and all the best luck!

*- Danny Wilson, Pixelmetrix, Singapore*

A quick note to congratulate you on the first edition, it just arrived on my desk today. Great layout, high quality printing and pictures, fine editorial. I wish you and the magazine all the very best, the industry is in need of it. *- Eric Masters, Director, Quantel Asia Pacific*

G'day guys, just read Content+Technology cover to cover, it looks pretty bloody good to me.

*- Chris Patten*

## Darlow to Denver as Encoda Architect

**Encoda Systems has announced Mark Darlow as their new Denver-based, Global Systems Business Architect for Media Management Solutions. Darlow, an industry veteran, moves from the Sydney-based position of VP Sales and Marketing Asia Pacific.**

## Directing Duo to Prodigy

**Jonathan Samway, Executive Producer, Prodigy, has announced the appointment of Charles Williams and Joel Kohn. Williams won the Intel Tropfest 2002 Best Young Director Award for the 35mm short *I Can't Get Started*. He and producer, Joel Kohn, then served in Romania as director's attachments to Anthony Minghella on the set of *Cold Mountain*. The duo then produced a musical comedy, *Ain't Got No Jazz*, as well as seven TVCs for EA Sports and two Honda commercials. Their next project is a feature film starring English actor, Ray Winstone.**

## Van Der Wolf Back to New Magic

**Darrell Van Der Wolf is finishing up as Marketing Manager with Canopus to return to New Magic as the National Sales/Marketing Manager.**

**While New Magic is now based in Sydney, Darrell will be based in a new Melbourne office. He can be contacted via darrell@newmagic.com.au**

## David Bowers New GM for Magna

**David Bowers has been appointed General Manager to the Magna Group of companies. David joined Magna in November 2000 from the Nine Network where he was the Engineering, Outside Broadcast and Technical Manager for Electronic & Satellite News Gathering.**

# Despite rain, Tropfest Shines

MC Adam Spencer above with finalist directors at February's rain-soaked Sony Tropfest short film festival. Comedian and film-maker Gary Eck was awarded first prize for his comedy *The Money*.

Audiences of over 130,000 saw the 16 finalist films which were beamed live via satellite to venues in Sydney, Melbourne, Canberra, Perth, Hobart and Brisbane.

A comedy about a hostage who is telephoned by the Who Wants to be a Millionaire quiz programme, Eck's *The Money* was shot on 16mm by cinematographer Mark Goellnicht while the two runner-up shorts were both animated. *Confessions Of An Animation* by director/producer Steve Baker and *Yin* by Costa Avgoustinos were produced with Macromedia's Flash 5 software. Designed initially for the web, Flash is finding increasing favour with budget-conscious animators.

**Pic - Phil Sandberg**.

# Nine Chooses generationQ

Australia's Nine Network has recently purchased Quantel's QPaintbox Pro next generation PC-based graphics system. The box, which has already seen use on a reworking of Nine's on-air branding, joins an extensive selection of Quantel equipment at Nine's Sydney HQ.

The Nine Network is a long-term user of Quantel technology, having initially purchased a Quantel Paintbox Classic not long after the machine's initial introduction in 1984. The services of the new QPaintbox Pro will be predominantly reserved for News and Current Affairs, where Paul Twyford-Jones, Manager of Post-production Services, claims "Its speed, ease of use and creative toolset will help raise the bar in the standard of the graphics we can produce in the short timeframe you have daily when dealing with a 6PM news producer.

"Quantel has always produced an extremely reliable product designed specifically for the broadcast industry," he adds, "with the appropriate processing speed and creative interface for both text and painting. The QPaintbox Pro will compliment our existing Paintbox FXs in producing animated graphics in the time frame necessary to meet on-air news commitments."

# Digitising the Script

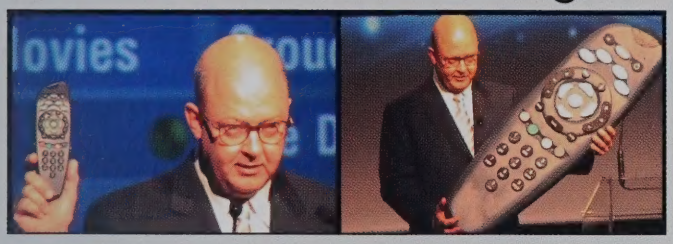
Visiting Sydney for the recent X-Media Lab was Mark Kennedy, CEO of Canadian company CeltX, whose Script Manager software is designed as a pre-production tools for film and TV. According to Kennedy, the software allows anyone working a production "... to do their breakdown functions in a script, which would normally be done with highlighters and yellow Post-It notes. So, what we've done is provided a way for them to do that in a digital environment. We've also added functionality that allows people to write scripts within the application itself."

Scripts from other applications can be imported into CeltX. Report generation is also built as is a collaboration mechanism (via a server) that allows different departments to work on the same documents. The application can also be used by CG departments in the pre-visualisation process.

"The beauty of it is that you can associate any kind of media with the script," says Kennedy. "Whether that's a gif, tif, jpeg, MPEG, Quicktime or pdf."

Information generated by the application can also be repurposed to other scripts and interactive special features on DVD releases. For more, visit www.celtx.com

# Foxtel's Date with Digital



Take one of these ... add some zeroes and ones ... and voila!

Their technology suppliers may be bemused at being portrayed as benevolent aliens, but despite (or because of) the silly ads Foxtel is now positioned to steal the digital "brand" from free-to-air broadcasters. With a March 14 launch, Foxtel's new digital service will see delivery via cable and satellite of more than 130 channels, interactive services and expanded viewing options, all with "DVD quality" pictures and "CD quality" sound.

The new service includes:

- Foxtel Digital Guide, an EPG that allows users to navigate and plan their viewing according to time, genre or channel. The EPG has program synopses and a memory/reminder function up to seven days.
- Foxtel Box Office, a near-video-on-demand movie service with around 300 screenings per day at intervals from every 15 to 30 minutes.
- Sky News Active, an interactive service allowing viewers to choose news from eight live video and five live text screens.
- Sports Active, which enables viewers to select multiple camera angles and match replays together with game statistics, player profiles and different audio feeds.
- Foxtel Gamesworld, two games channels and 10 different games.
- Foxtel Digital will also include more than 45 channels in 16:9 widescreen and 13 channels with Dolby AC-3 surround sound.

According to Foxtel, switch-off of analogue cable and satellite services is not planned for the immediate future, but the company will stop selling those services. A touted compliment to the service, an NDS-based Personal Video Recorder (PVR), is expected to be available around March 2005.

Foxtel will supply new digital set-top-units and remote controls as part of the service. The company has confirmed the basic Foxtel Digital package will cost AUD$48.95 (the cost of the existing satellite basic service), and has committed to maintain this price cap until at least the end of 2005.

The question remains what effect this will have on subscriber take-up and to what degree it will muddy public perception as to what constitutes "Digital TV".

## Lukacs and McCarey to Provideo

**Steve Lukacs recently joined Provideo as its new General Manager.**

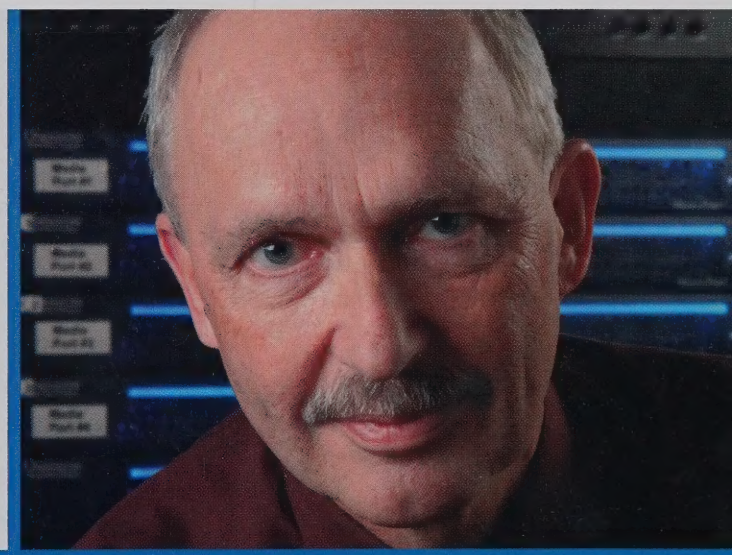
**The appointment of Steve has allowed Ian Fleetwood (one of the original founders of the business) to move into the Operations Manager role. In addition, Ken McCarey has been appointed as International Sales and Marketing Manager. Ken was formely with Chyron in HK. He will focus on SE Asia, China and the Indian Sub Continent.**

## Benfatto to ARFC

**ARFC Pty Ltd has announced the appointment of Richard Benfatto as Sales Manager. Richard comes with a technical background and 15 year's experience in the broadcast market. He can be contacted by e-mail on sales@arfc.com for information on products and services.**

*"We selected Omneon servers and shared storage for playout, and have since connected our production processes. Omneon is the one solution that fits our tight budget, meets all our requirements today and supports us as our needs change."*

Helge Blucher
Vice President
Detroit Public Television



Detroit Public Television operates on a very tight budget with limited resources. When it came time to select a media server, they needed a cost-effective solution that gave them both operational efficiencies and the flexibility to satisfy multiple requirements.

With Omneon SPECTRUM™ media servers, Detroit Public TV implemented a solution that worked across their entire operation. Built around the concept of Smart Scalability™, Omneon SPECTRUM systems can be configured to meet precise format, channel count, bandwidth and storage specifications. What's more, Omneon SPECTRUM systems can then be expanded in smart, manageable increments– without replacing the original system and in many cases, without taking the system off-line.

To learn more about the unique advantages of an Omneon SPECTRUM media server system visit www.omneon.com.

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### Chia to Head Singapore MDA

**Dr Christopher Chia will be the new Chief Executive Officer of Singapore's Media Development Authority (MDA) with effect from 1 June 2004. He takes over from Mr Lim Hock Chuan who will be posted to the Ministry of Home Affairs as Deputy Secretary.**

### AV Central New SA Showroom

**AV Central Adelaide has recently undergone a total renovation and now offers the South Australian Video industry the opportunity to experience a complete range of DVCAM camcorders, Avid XpressDV NLE systems, Miller tripods, as well as complementary products on show at their George Street, Thebarton, premises. AV Central is a joint venture between seven professional video production and audio visual dealers across Australia. Visit www.avcentral.com.au**

### Avid Partner for Perth

**Avid Australia has signed a reseller agreement with Perth-based Edit Solutions. Under the agreement, Edit Solutions becomes a reseller of the Avid Xpress family of editing systems. According to Bob Glover, Product Specialist, "We are confident that the addition of the Avid Xpress family to our product portfolio will be well-received by our existing and prospective customers."**
**Edit Solutions can be contacted on (08) 9228 2150 or via email at support@editsolutions.com.au**

### Quinto Takes on Omnibus

**Omnibus Systems and Quinto Communications have signed a distribution agreement that will see Quinto assuming responsibility for sales and service of all OmniBus automation and asset management products in Australia and New Zealand. According to Greg Hoskin, OmniBus' Senior VP, Specialised Sales & Marketing, "When we talked to clients about local distributors, the name Quinto kept coming at the top of their recommendations."**
**Contact Quinto on +61-(0)3-9558 9377. www.quinto.com.au**

# Japanese DTV on the Air

Tokyo Tower, DTV transmission central. (Inset) Kenji Noshi of NTV.

Japan's biggest cities have had their first taste of free-to-air HD broadcasting with commencement of transmissions from December last year using the Japanese –developed ISDB-T transmission system. Analogue switch-off is due in 2011.

With 30 stations across the country, one of the major players facing negotiating the digital transition is Nippon Television Network Corporation (NTV). According to Kenji Noshi, General Manager of NTV's Technology Planning, Engineering & Technology Division, the Japanese commercial broadcaster's digital service currently covers around three million households in Tokyo, Osaka and Nagoya (with Tokyo only making up 120,000). The network expects that by the end of 2004, the number will rise to 6.5 million with 14 million homes being covered by 2006. Noshi-san anticipates reaching 98 percent of Japanese homes by 2011. Correspondingly, it has been reported that sales of dual analogue/digital receivers reached the 500,000 mark in December.

NTV, which also operates news and sports satellite channels, has recently moved into new purpose-built premises near Tokyo Tower, the main transmission site for digital services of all broadcasters. Fitted out by Sony, the facility features an internal fibre network capable of routing HD material.

All signals coming into the facility are upconverted to high definition. All studios will produce programmes in HD. The facility's Master Control area outputs three streams – HD for digital terrestrial (transmitted in 16:9, 1080i at 15Mbit/s in a 6MHz channel slot), SD for digital satellite and an analogue simulcast of the HD stream.

The operation is supported by a Sony server with capacity of 320 hours of HD-CAM compression able to ingest 19 simultaneous streams. Two smaller servers (one back-up) of 13Tb capacity store edited material for use by the master control room.

In terms of editing, there are 15 suites throughout the facility capable of editing both Sony HD-CAM and Panasonic DVC-PRO HD. A further three of each deck types are used for digitising incoming material.

Yet another Sony server is used for access by journalists to view proxies of incoming material and to generate rough edits. There are also a further 30 linear editing booths. In terms of VTRs, the station has 279 HD-CAM decks, 42 HD-CAM SR 91 Digital Betacam and 69 D2 decks.

**- Phil Sandberg**

# Irdeto Access Approved by China

Irdeto Access has become the first foreign conditional access supplier in China to receive State Administration of Radio, Film and Television (SARFT) CA certification. Irdeto Access successfully completed the data retrieval and interface requirements set by China's SARFT for its conditional access (CA) solution, Irdeto Plsys.

The certification recognises Irdeto Access' continued commitment to support policy formation within the SARFT and to comply with the requirements of relevant China government agencies.

Irdeto Access received the CA certification following a demonstration on Qingdao CATV's platform, one of Irdeto Access' customers in China, during a National Digital TV Work Conference organised by the SARFT in Qingdao City. The SARFT announced its requirements for data retrieval and interface in August 2003. This resulted in Irdeto Access delivering a software module that generates detailed information about subscriber entitlements to be connected with the SARFT Supervision Platform. The SARFT Supervision Platform is responsible for collecting all original subscription data from CA and Subscriber Management systems at provincial and municipal level CATV operators. The data retrieval and interface requirements are a mandatory part of the CA certification process currently underway in China.

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# Free Trade or Free Reign?

By Rob Nicholls, Partner (Professional Engineer), Gilbert + Tobin Lawyers

**THE RECENTLY** signed Australia-United States Free Trade Agreement or FTA (yet to be ratified at time of going to print) has often been argued to be a threat to Australian cultural values by content producers and providers. Bilateral free trade agreements have the potential to have unintended regulatory consequences and these are particularly likely to occur in the rapidly changing "convergence" space of broadcasting within information and communications technologies. Convergence itself will not override the need for appropriate regulation but will create regulatory challenges for which there need to be Australian solution which are not limited by the FTA. That is, regulators must retain the flexibility to apply appropriate levers in a variety of technological environments. At the same time, regulation should not be used to distort positive forces which are evolving in Australia.

## THE AGREEMENT

The Australia-United States Free Trade Agreement is likely to have a strong influence on Australia's cultural policy objectives. Irrespective of whether these influences are positive or otherwise for the domestic audio visual content production sector, Australian policy-makers will be faced with a fundamental question.

**"What is the appropriate regulatory response in a free-trade environment?"**

Regardless of the specific issues which will be for regulatory consideration, certain regulatory tools may be needed in future to provide the appropriate response or correct any distortions which may arise. Some of those regulatory tools are used currently. Some of them may be options under consideration; while others have yet to be developed.

The USA has countered this concern by adopting the position that any analogue service that is currently regulated will be unaffected by the FTA. Conversely, any digital service should be explicitly addressed by the FTA. Nevertheless, the US Trade Representative's "fact sheet" on the FTA included the analysis that:

"In the area of broadcasting and audiovisual services, the FTA contains important and unprecedented provisions to improve market access for U.S. films and television programs over a variety of media including cable, satellite, and the Internet."

This leaves a challenging position for Australia. It means that the imperatives of regulation need to be balanced between those which are pro-active, and those which may be needed in response to market developments in a free trade environment. One imperative that remains constant is that nothing in the Free Trade Agreement should restrict Australia's options and ability to regulate appropriately and as necessary. This appropriate regulation will ideally include the positive elements of Australian regulatory processes, such as consultation and transparency.

## CONTENT

Content is integral to a country's sense of national identity. The development of national identity, character and culture is one of the objectives of Australia's broadcasting legislation. We have systems of classification devised under legislation or codes. Although specific classification decisions sometimes arouse controversy, standards of acceptability largely reflect a sound cross-section of Australian society.

Irrespective of its origins, Australian audiences will judge content according to Australian acceptability criteria. The combined streams of regulation should also apply equally to all content, regardless of its origin. As a general principle, complaints of violence are among the most prevalent in Australia to various regulatory bodies, demonstrating that Australians are quite sensitive to depictions of violence through any channel. However, Australian audiences are generally more liberal than the United States on subjects such as sexual depiction. The popular programs *Sex and the City* and *The Sopranos* are broadcast on free-to-air television in Australia, but are only available on subscription television in the United States.

This leads to the conflicting objectives of national cultural development and non-discrimination against US content. Equal treatment of content will not in itself resolve this conflict. Regulation of content standards does not operate in a vacuum, but instead requires pro-active commitment and support for local sensitivities.

## INTERACTIVE TV

One of the great success stories of television in the past year has been the commercial success of viewer participation, largely driven by telephone devices, particularly short messaging service (SMS). SMS has a huge mass market appeal and is now widely perceived as the predominant form of iTV in Australia. This interactivity will be enhanced through future uptake of multi-media messaging service (MMS).

The phenomenon of viewer interaction has a positive correlation with Australian-produced content. By its nature, iTV (at least through the SMS/MMS applications) works best with real time simultaneous broadcasts. *Australian Idol* was the highest rating non-sports program on Australian television in 2003. Nine's *Getaway* program has recorded viewer interactivity of over 300,000 SMS calls providing input on favourite segments.

The evidence is that the iTV preference is for locally-produced content in which a viewer may have an interactive experience. From a free trade perspective, the critical issue is the danger that the trend towards the locally-produced iTV experience will not be allowed to evolve.

## REGULATORY INSTITUTIONS

Industry participants in the audio visual sector are subject to both general and industry-specific laws, administered by different regulators, for example competition issues are overseen by the ACCC, technical and spectrum issues are the responsibility of the Australian Communications Authority (ACA) and the Australian Broadcasting Authority (ABA) is responsible for regulation of content.

Previously distinct sectors in the audio visual industry now compete across increasingly convergent markets using

a range of different delivery platforms. This convergence of communications technologies and markets is placing growing pressure on the current regulatory institutional arrangements. This pressure has resulted in the Australian government to consider new institutional arrangements for the ACA and the ABA, including a merger of the two regulators.

As the number and variety of audio visual services expands, it is likely that some services will fall outside the current regulations with respect to domestic content and national culture. Australian regulators need to be in a position to pre-empt and adapt to necessary changes brought about by technological change. Non-uniform regulation of competing services will not only weaken the effectiveness of the regulations but will also distort industry structure and competition.

## INCENTIVES VS ENFORCEMENT

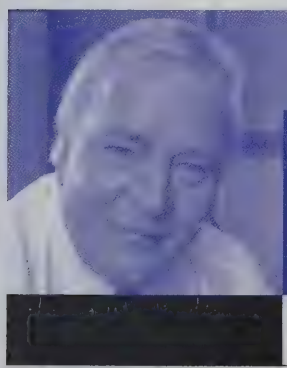
Providers of audio visual services do not always have an incentive to take account of public benefits such as the enhancement of national culture and the maintenance of community standards, being primarily focused on providing competitive, profit-maximising services. Australia's approach to regulation, based on industry participation, ensures an appropriate balance between these conflicting objectives.

Over the past decade, the Australian audio visual industry has undergone a substantial shift away from government regulation to a unique system based on industry self regulation, provided for in the BSA. Industry participants in Australia are given an opportunity to provide significant input in the development of codes governing the industry.

Self regulation results in an open, predictable and transparent framework. By allowing a certain degree of self-regulation, industry groups have greater understanding of their obligations, fostering enhanced compliance with the codes. However, it is hard to reconcile how industry self-regulation can be consistent with FTA mandated market access for new entrants that will necessarily not be part of the existing industry.

## WHERE NEXT?

Protection of cultural identity and local content has been a fundamental plank in broadcasting policy. There is a danger that this will be a victim of the rush for a free trade agreement and that the regulatory frameworks and institutions tasked with implementing this policy will also be lost.



# SPAA-ing with the US

<< << **SPAA Executive Director, Geoff Brown.**

**THE EXECUTIVE** Director of the Screen Producers Association of Australia, Geoff Brown, may well be wishing he had gone into sugar cane farming instead of pushing the cause of Australia's film and TV content producers during the recent US-Australia free trade negotiations.

With their industry excluded from the Free Trade Agreement, the Federal Government is looking at ways of "compensating" cane growers, but nothing has emerged for the local production industry.

"We were offered that money 12 months ago by the Americans," claims Brown. "They actually came up to me and said what will it take to buy off each of your members? Being Australians, we didn't think that was terribly honourable.

According to Brown, "Within three to five years, we will see a diminishing of Australian content and within ten to 15 years, we will see a serious erosion.

"The reason for that is the Government seems to have locked us into the current levels of regulation, the current content rules, and said that they will apply forever and a day. However, all that regulation was developed in an analogue age."

Brown says that an introduction of digital multi-channelling of free-to-air services, for example, could mean that a minimum 50 percent of those services carry no Australian content altogether.

"If you're not running HD," he says, "and they're only required to run 20 hours of HD at the moment, you can run six standard definition digital channels, which means that half of those channels aren't required to run Australian content.

"Now, that's based on today's technology. Compression techniques evolving in the way they are, the future may deliver on that current six becoming 12 to 24 channels. So, something like 80 percent of your digital service won't be carrying Australian content."

Brown says that when it comes to other content delivery platforms, the FTA arrangements represent a blank cheque for US content owners.

"Kim Williams has announced 120 digital channels. Where does all this work in the mix of all that? We know in 15 to 20 years that free-to-air won't look the same as it does today and we'll have extremely limited capacity to see Australian stories on any new platforms.

According to Brown, statements from the Australian Government and US Trade Representative, Bob Zoellick, have contained contradictory messages.

"The more we look at the details, the more we think the Americans have every right to gloat about this, especially on subscription TV and the growth of digital multi-channelling on the free to air services if it's linked with any relaxation of cross and foreign ownership rules.

"The one thing that has been explained to us is that the FTA will not impact on subsidy, which means we've managed to avoid debate about things like the Film Finance Corporation.

"One of the ways we might be able to approach the whole issue long term is to sit with Government and say 'if these are the outcomes and they seem very negative, how can we maybe through a tax concession or an R&D approach to the issue deal with it in the longer term – in other words deal with the issue of market failure for TV production in Australia in another way.

"But, we don't want hand-outs. We want structural reform of the industry that will allow us to build the industry."

# Parliament needs return power - to itself

By Rob Nicholls, Partner (Professional Engineer) Gilbert & Tom Lawyers

**THE AUSTRALIAN** Broadcasting Authority (ABA) is the broadcasting regulator. That is, the ABA implements the Governmentís policy as set out in the legislation, in this case the Broadcasting Services Act 1992 (BSA), and creates regulations to ensure that the policies are complied with. Parliament passes the legislation that is necessary to set policy directions and, in this case, passed the BSA and its amendments.

However, there is an anomaly in the BSA that puts the ABA in the position of deciding policy. The problem is simple.

It is Government policy that there should not be a fourth commercial television network in Australia before 2007. It is not Government policy that on 1 January 2007 there should be a fourth commercial network just that there must not be beforehand. The BSA (section 28) sets this out by prohibiting the ABA from issuing a fourth commercial television broadcasting licence in any licence area. However, the section does not prohibit the ABA from planning such a licence and it could be argued that the ABA is obliged to commence such planning.

The ABA has the responsibility for licence area planning and for determining its own priorities in that planning. It has to have regard for issues such as social and economic characteristics, the number and demand for new broadcasting services within a licence area, within and developments in technology among other things. All things being equal, it may decide to go ahead with issuing a fourth commercial licence - even if this is not Government policy!

The Minister for Communications, Information Technology and the Arts (currently Darryl Williams) cannot stop the ABA. Under section 162 of the BSA, the Minister may give directions to the ABA but these directions are to be only of a general nature. That is, the Minister cannot direct the ABA not to plan for a fourth commercial television broadcasting service even if Government policy is not to have one.

This mess needs to be resolved quickly to ensure that investments by the current networks are not adversely affected by regulatory uncertainty and that the ABA maintains its role as a regulator, rather than a policy maker. There are some hopes that Parliament will move to return its own functions to itself this year. However, election years are notoriously bad ones in which to repair faults.

# ITAX CHANGES - LIFE'S THIRD CERTAINTY!

By Jonathon Leek, Partner, Gilbert + Tobin, Lawyers

**THE OLD** saying is there are two certainties in life - death and taxes. A third certainty might be that tax laws never stay the same for long.

This article looks at a couple of tax changes coming up or in the wind that may prove relevant to content and technology.

**Withholding tax changes**

Australia has recently entered into a new double tax agreement with the United Kingdom. This follows amendments to Australiaís agreement with the United States.

Both agreements reduce the rate of withholding tax on royalties paid from one country to another from 10% to 5%. Relevant to content and technology, the term "royalties" generally includes payments for the use of, or the right to use, any: copyright, patent, design, model, plan, secret formula or process, trademark or other like property or right; motion picture films; or films or audio or video tapes or disks, or any other means of image or sound reproduction or transmission for use in connection with television, radio or other broadcasting.

The agreements also eliminate withholding tax on dividends on certain substantial shareholdings and reduce the rate from 15% to 5% in some other situations.

These withholding tax changes should encourage US and UK investment into Australia and Australian expansion into the US and UK. They are effective from 1 July 2003 in the case of the US and 1 July 2004 in the case of the UK.

Similar amendments to Australiaís agreements with France, Italy, Switzerland, Austria, Finland, Norway, the Netherlands and Korea look set to follow.

Research and Development

In an election year, the research and development tax concessions may attract some attention.

At present, the primary tax concessions are:

* a 125% deduction for labour and other direct R&D expenditure;
* a 100% deduction for expenditure on core technology;
* a 125% deduction for expenditure on R&D plant over its effective life;
* a 100% deduction for expenditure on R&D buildings over 40 years;
* a 175% "premium" deduction for a companyís increased R&D expenditure over its three year average; and
* a refundable tax offset for small companies.

The Coalition Government has no plans to change the present arrangements and the Labor Opposition under Mark Latham is yet to release any detailed tax policy (and is unlikely to do so until after the May budget). However, in a Draft National Platform released at its National Conference held in January 2004, Labor indicates it will develop R&D initiative aimed at manufacturing, biotechnology and information and communications technology. This is with the goal of achieving at least the OECD average for business expenditure on R&D by 2010.

In an election year, anything is possible. And tax laws never stay the same for long.

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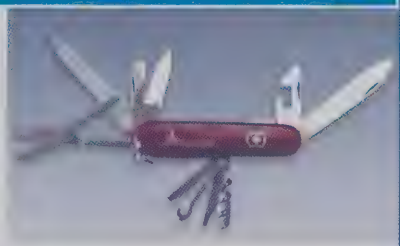
## SWISS ARMY KNIFE - STREAM Z!



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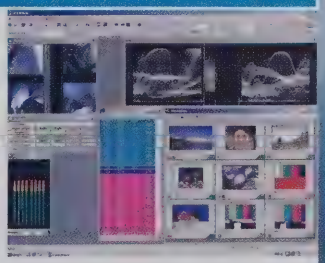

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# Beware; the test case not bearing gifts

By Karl Jansson

**AT J-CURVE** we are constantly monitoring and addressing changes in the work place that may affect our clientís ability to manage their day-to-day business. As our business is recruiting Television and Broadcast professionals, we thought best to keep you alert of one very alarming test case in Australia.

We have been alerted to a submission by the Labor Council of NSW submitting an application to the Industrial Relations Commission of NSW to vary a number of Awards. So why would a NSW-based submission be a concern to the rest of Australia?

If the Labor Council Application is successful, the proposed variation would flow on to all other New South Wales Awards by application. As the IRC in NSW is closely watched by other jurisdictions, the potential exists for this application to set a national precedent.

It's called the **"Secure Employment Test Case".**

Initially, the following awards will be addressed;

* Crown Employees (Public Service Conditions of Employment) Award;
* Storemen and Packers General (State) Award;
* Storemen and Packers Bond and Free Stores (State) Award; and
* Local Government (State) Award

**So what is the variation being sought?**

* There are four main elements to the new Clause.

**1) Permitting casual employees to opt for permanent employment after six (6) months;**

Under the application casual employees will have the right to elect to convert to permanent employment after 6 months service. This will not apply to "Irregular" casuals. However a six month period need not have been continuous (i.e., a "sequence of periods" is adequate).

Also under this clause the employer cannot unreasonably refuse a request by a casual employee to convert to permanent employment.

**2) Limiting the circumstances in which an employer can use labour hire employees;**

Under this clause Employers will be prohibited from using labour hire unless the labour hire employees are for temporary work which could not reasonably be done by an employer's existing employees (including casuals); or after six months service the labour hire employee may elect to become permanent with the host employer.

Additionally, the terms and conditions for the labour hire employees must be no less than they would have received as employees of the host employer performing the same work.

**3) Limiting the contracting out of work by employers;**

Contracting out by an employer to be prohibited unless, the employer commences discussions with the Union and employees at least 12 weeks before the contracting out; and if the employer proceeds to contract out, affected employees must be provided with 12 weeks' notice.

Additionally the employer must offer the displaced employees alternative employment with remuneration and conditions no worse; or require contractor to employ displaced employees and require the terms and conditions of employment offered by the contractor to be no worse.

Under this clause there may be limitations such as contracting out not to be used for:
a) Avoiding paying a benefit to an employee;
b) Avoid any other lawful obligation; or
c) Weaken a Union's presence on site.

Onus of proof will be on an employer if a Union alleges contracting out was used for any of the above reasons.

**4) OH&S obligations on "host"employers**

Requires a "host" employer to:
a) Consult with contractors/labour hire employees over OH&S consultative arrangements;
b) Provide induction training;
c) Provide safe work method statements and personal protective equipment;
d) Take all reasonable steps to provide appropriate light duties for an injured contractor/labour hire employee.

As this test case will more than likely effect in the main, the on-hired labour industry, employers should remain vigilant throughout 2004.

This test case could impact upon your business and its ability to hire and manage future labour hire employees, regardless of your location.

The case has been called on before a Full Bench of the NSW IRC for May 2004. (*Source: RCSA)

If you would like to be kept up-to-date with the progress of this test case, please email J-Curve directly.

** Karl Jansson is General Manager of J-Curve Broadcast Recruitment Consultants.*
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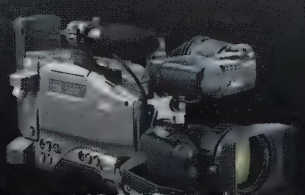

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# When Less is More –

## News Production at Southern Cross Broadcasting

<< <<
SCB Newsreader Sarah Cumming.

Continuing last issue's look at the centralisation of Southern Cross Broadcasting, Brad Redwood* details the the network's restructured approach to news.

Should you first walk into Southern Cross TEN's new Canberra News facility, you're struck by the calm ambience and impressed by the simplicity of the studio control room. There are two purpose-built studios known as Studio 6 and 7 that glow from the bright Ultimatte lime green rear walls lit by cool fluorescent lighting. Just one control desk houses a minimalistic layout for both Studios spanning the two acoustically glazed Studios to provide the operator with direct eye contact to the Newsreaders. There are two newsreaders and one production operator. Yet this facility generates more than 160 newsbreaks each weekday.

Southern Cross Broadcasting (SCB) launched its nationwide News Update broadcast operations on February 2nd 2004 using networked media solutions from Pinnacle Systems, AP-ENPS, Vertigo X Media, Ultimatte, CuewWord, Masstech, DNF controls and Softel. The installation was designed, installed and commissioned by Techtel Pty Ltd and centers on a revolutionary production concept using DekoCast Video Engines & large-scale deployment of Pinnacle MediaStream 3900 Networked Storage Servers to produce 80 News Breaks and 80 Weather Updates daily, 5 days a week at SCB's Central Playout Centre in Canberra.

*(Continued Opposite)*

*(from page 14)*

## SO WHY IS IT DIFFERENT?

Southern Cross required a system that would keep up with the pace and volume of a centralised News operation producing the latest local news for 17 regional markets. Their aim was to rapidly produce contemporary looking updates in a resource optimised, automated system. The first challenge was to provide the Journalists located at eight regional centres across Australia with a full complement of scripting tools and make each system concurrently viewable by the Director of News in Canberra. AP's ENPS version 4 was chosen for its maturity, professional journalistic tools and powerful use of MOS protocol. ENPS resides on redundant servers in Canberra which are networked on SCB's private WAN to the remotes offices.

While the production requires just three staff, it's the editorial control given to the field journalists that make this system so powerful.

"Our journalists gather material from local sources to write the scripts and insert images and graphics into each script for each news update," said Jeremy Flynn, SCB director of news and Current Affairs. "Similarly they enter weather and sponsorship detail. One of the unique ENPS features is the intelligent 'email by wires' system which directs incoming stories and attached picture elements to a central storage location as well as the recipient. So, to our journalists, it's all automatic. They only need to consider the story, not the technology."

There is no dedicated News Graphics department at SCB; instead Journalists have been trained to use the integrated Vertigo X Media MOS plug-in. Opening within ENPS, the Vertigo Media browser allows Journalists to create and select graphics and pictures for OTS (over the shoulder) placement. A simple template based menu offers SCB's livery of graphic styles. Armed with these tools, SCB's

Journalists are now enjoying total control of their stories selecting the OTS style, picture content, and slug, and text. Effectively, the remote journalist is preparing the material for automated control of the prompter and closed caption system, the rolling of opener and closer, still-store, character generator, video overlays, DVE, mixer.

Once the News Director in Canberra performs the sub-editing of scripts, the automated production continues. When Sarah Cumming, Newsreader for the Southern New South Wales market (or any of the three other presenters) takes her seat in Studio 7, the fully SDI 16:9 suite looks larger than life thanks to the totally realistic composite from the Ultimatte 400 chroma keyers. The talent performs the read and controls their prompter.

The "control room", if you can call it that, is a complete departure from the norm. The desk layout is mirrored for both Studios and based on the concept that less is more. All you'll see here is a couple of VGA touch screens, a tactile operator interface and picture monitoring. Gone is the switcher tub and DVE, character generator keyboard, still store panel, half a dozen VGAs, and VTR cart machines! Excluding acquisition and archiving, the entire operation is tape-less. Replacing all this equipment is a Pinnacle Systems DekoCast video engine that sits out in the rack room and powers the whole show. More on DekoCast in a moment. With all the pre-production done, Vertigo sends the completed rundown to its control application called Xplay.

## PINNACLE DEKOCAST

Vertigo talks to DekoCast via Gigabit LAN and presents the operator with a sophisticated user interface. In place of the traditional multi

*(Continued page 16)*

*(Continued from page 15)*

<< <<
**(Centre) Monitoring and Vertigo X media clustered server, ENPS main and backup servers and Cueword. (Outside racks) Pinnacle DekoCast, MediaStream, Connectplus, Ultimatte and Softel.**

panel control desk, using VertigoXMedia and the Dekocast, the following operational windows appear on a touch screen SVGA monitor: On-Air; Pre-view; Cue; Take; Stop; Re-cue; Elapsed time; Rundown list; Available assets; Weather, Market and ticker display.

Xplay in conjunction with a DNF 3040/ SR-6 controls the DekoCast graphics, DVEs, keys, audio mixes and transitions. The whole process includes automated clapper generation, electronic countdown and timing. When the TD clicks on "Take" Vertigo loads DekoCast and progresses through the rundown from top to tail. DekoCast can produce virtually any On-Air look without a complex MEs keyer buttons and knobs found on a traditional vision mixer. For example, a single operator controlling the "Take next" or "Stop Recue" functions on Vertigo Xplay causes the News Update lower frame Super to slide on and off and OTS graphics to transition forward.

Taking scripts directly from ENPS, Cueword generates the prompting for the Newsreader who controls the prompter speed with a hand controller. Simultaneously, CueWord uses its CueCaption driver to send data to a Softel caption inserter. The Softel is wired downstream from the DekoCast to provide embedded closed caption information.

To record the News Updates, the Caption inserter output is fed to a pair of mirrored MediaStream 300 servers, which automatically record the segments via a DNF controller, triggered by Vertigo Xplay. This process ensures that a frame accurate SOM and EOM are created for the clip without the operator needing to mark any points. The 15Mbps MPEG-2 long GOP files created on the Mediastream 300 are fully compatible with SCB's Mediastream 900 SAN playout servers. When the TD QC's the News Update, SCB's Masstech MassStore asset management system automatically file transfers them to the On-Air MediaStream 900 playout servers. At the same time, MassStore creates an MPEG4 proxy that's available to anyone on the SCB WAN for previewing and reviewing on a standard Windows Media player. And, in the background, the existing Spectra Logic tape library associated with the MassStore Asset Management provides long term archiving of the completed News Updates, whereas the MassLogger centralised logging facility provides a ready means of reviewing content for some several months.

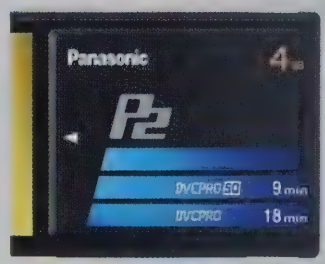
SCB recently deployed around 20 Pinnacle Liquid Silver non-linear editing and transcode facilities for the purpose of commercial and CSA production in regional centres. These facilities can also be used to generate news material.

In today's MOS-based, networked world, content exchange between nonlinear editing, playout servers, Newsroom systems, asset management and control devices is paramount. By exploiting the next generation of technology and methodology the SCB system is seamless and delivers more creative power compared to old-fashioned News production systems. Executed in this fashion, the whole process is somewhat invisible yet in real time Southern Cross TEN now produce fully digital News Updates with graphics, OTS's, LVO's, automatic Weather tickers, transitions, DVE's, audio mixes and 3D Weather fly overs ... all recorded and aired by a single operator.

The Pinnacle DekoCast's, MediaStream servers, Connect plus, Liquid NLE's, Vertigo X Media, AP-ENPS, Masstech MassStore and MassLogger, Ultimatte keyers, CueWword prompters, Spectra Logic Library and DNF3040's were supplied and installed by Techtel Pty Ltd of Sydney.

** Brad Redwood is Account Manager/ Product Specialist with Techtel Pty Ltd.*

# Solid-State Newsgathering




**PANASONIC** is banking that its P2 series of DVCPRO camera-recorders will bring an entirely new level of mobility to news gathering. Because they will have no moving parts, they offer resistance against shock and vibration. They will also be smaller, lighter, and more power-efficient than VTRs. Camera-recorders can be equipped with several card slots, and cards can be replaced while recording. Data recorded onto the P2 card can be transferred at high speed to a PC or hard disk drive, and the card can then be reused immediately.

Panasonic's IT News Gathering (ING) System features the new solid-state memory "P2 card" as its recording media. Four SD Memory Cards can fit into a single unit the size of a PCMCIA card. It has four times the capacity and four times the transfer speed of a standard 1-GB SD Memory Card. A 4-GB P2 card records 18-minutes of DVCPRO compression data. Panasonic predicts 16-GB Memory Cards will be released within two years and 64-GB thereafter.

The P2 card plugs right into the mobile PC's PCMCIA slot. Users can construct a mobile nonlinear editor by simply installing software to a laptop PC. In addition to speeding up field editing, the P2 series lets users broadcast news footage right from the field. Using a P2 deck with interfaces and operation similar to VTR systems, on-air transmission in real-time is possible from an OB van. Files can also be transferred over a network from the PC.

A memory card reader/writer equipped with a USB 2.0 interface will allow easy data transfer between memory card and PC. Servers and nonlinear editors can share footage sent from the field over the studio network. The Panasonic P2 Card will be available in Australia mid-2004.

Reach Rexel Video on 1800 011 053 or www.rexelvideo.com.au

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# ENG Frequencies on the Move

**AUSTRALIAN** Government legislation requires the country's broadcasters to move frequencies for ENG links by February 2005.

According to Noel Matthews, Business Development Director with Tandberg Television (UK), recently in Australia on secondment, news organisations should see this as an opportunity to move to digital ENG platforms.

"There is no mandate that says broadcasters have to move to digital," he says, "but there's a reduction in spectrum and a change in frequency, so a lot of the networks are using that as a reason to reinvest in the whole system. So, what's happening over the next 12 months is a complete re-engineering and re-investment in the ENG systems of all the major networks."

With its strong history in the area of video coding, DVB-T standards and the recent acquisition of German microwave radio company, AVS, Matthews says Tandberg has been able to pull together the products and integration skills to meet the needs of broadcasters wanting to upgrade their ENG networks.

"The most valuable thing we've got in our offering is multi-way diversity for central receive sites," says Matthews.

Receive equipment for a digital video system is normally mounted on a high tower or building. Typical antenna systems consist of a high gain steerable antenna or multi plate arrays are used to provide 360-degree coverage. Previously these systems would require highly skilled personnel to manually switch to the best aerial or track a moving vehicle to obtain the best link performance.

Tandberg TV has developed a central receive system based around 6-way diversity receiver technology which offers high performance but which requires no manual operation. The systems employs five flat plate antennas, each with a beam width of 80 degrees and a gain of 17 dBi, which are mounted on the tower or building to give 360 degree coverage and fed in to a port on the diversity receiver. When a mobile unit transmits, the diversity receiver will detect the unit and, using the FFT-MRC diversity process, sum all the available signals from the antennas that can see the unit to obtain the best possible signal.

The diversity process is dynamic and so will automatically track any mobile unit by selecting different aerial combinations as it moves around the central receive site. Where a number of central sites are deployed diversity techniques can be used to provide automatic cell handover between sites.

Reach Tandberg TV on +61-(0)2-9356 8599 or visit www.tandbergtv.com

# Training for Conflict Zones

**BASED** in North Sydney, AKE Asia-Pacific provides specialist risk services to businesses, NGOs and the media. The company provides a wide and integrated range of services, training, equipment, and technology.

The company conducts a 5-day residential course called Surviving Hostile Environments at Dooralong on the NSW Central Coast. The course costs AUD$4200 and covers accommodation, meals, tuition, an aide memoire, trauma kit and insurance cover.

All instructors are from the Special Air Service (SAS), are qualified paramedics and operate in conflict zones on a regular basis. Instructors are rotated from a conflict to a training course.

Contact AKE Asia-Pacific at +61-(0)2-9025 3525. Visit www.akegroup.com

# Remote Proxy Editing

**TWI** Interactive, a division of Trans World International, is currently releasing a Beta of NetEdit SDK. The application allows proxy content to be edited from a remote location over the internet without having a local connection to the source (UNC or SAMBA).

According to TWI's Tim Day, "This gives the ability to do true remote production. We have this fully working in our Interactive Content Factory (ICF) Solution."

NetEdit SDK is a suite of server and client components that enables developers to build applications for professional desktop editing of live and archived content using the Windows Media 9 Series platform.

Potential applications include: Archive viewing and editing (DAM, MAM, CMS); Live viewing and editing (news, sports); Playlist management (automation); Closed-caption and subtitle generation; AAF-MXF workflow applications.

The application features: Viewing and editing of live video remotely; Immediate access to frame-accurate content, even while still being recorded; "Up-to-the-second" access to live content; Full audio and video scrubbing of source clips and edit timelines over the network; No custom hardware or expensive NLE suites required, just a regular PC workstation; Generate AAF/EDL files for craft edit integration; All components use standard Windows Media 9 Series files/streams; Widely-used, highly-scalable video platform from Microsoft; No proprietary encoding hardware or software required; Compatibility with other WM9 consumer and business systems guaranteed; Supports SMPTE enbedded timecode.

Visit www.twii.net

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NGA 8752

# Optical Recording for Television Acquisition

By Philip C. Nottle, Training Manager, Sony Australia Limited

**ABSTRACT:** The introduction of a new form of recording media into the world of professional television acquisition has brought with it many benefits "borrowed" from the IT world.

No longer are we concerned about tape format for now we are recording files onto an optical media. Now we have the benefit of random access to those recorded files. We can send those same files via network style connections to distant editing centres. By using low-resolution proxy files (created in parallel with the high resolution main program), we can rapidly view and edit our source material to create an EDL, bypassing the current need to digitise the source material before work can begin.

Sony, through the development of the optical recording products, has sought to bring about convergence of the video product with IT based infrastructure; a growing necessity with the increase in the use of server based work environments.

This paper looks at the technologies and concepts behind the Optical Recording products and how they can enable networks to "work smarter and faster".

## INTRODUCTION

The professional optical disc is a newly developed, single-sided, optical disc that uses state-of-the-art blue-violet laser technology to enable extremely large-capacity recordings. The diameter of the disc is only 12 cm, equal to that of other optical media such as CDs or DVDs. Yet, despite its small size, the disc provides an amazing storage capacity of 23.3 GB - a feat made possible using a 405 nm blue-violet laser and an object lens with a 0.85 numerical aperture (NA) and specially developed recording layer.

This capacity allows a recording time of 45 to 85 minutes depending on the bit rate the camera operator chooses.

The use of optical disc technology eliminates the restrictions inherent in proprietary tape footprints, and allows a variety of different video formats to be recorded using the same disc. Video and audio are treated as 'data files', and therefore these data files are extremely flexible as to what can be recorded to them. In addition to video and audio streams, you can record a variety of metadata, such as date/time/location information, scripts, low-resolution video and audio, etc.

## OVERVIEW

### The Ultimate in Acquisition Convenience

Sony's new optical disc camcorders take full advantage of this new optical media. Recordings on optical discs are automatically made on the empty area of a disc; relieving camera operators' concerns about accidentally overwriting other confirmed 'takes'. Furthermore, because acquisition is an ongoing process of shooting and reviewing, this eliminates the burden of searching for the correct position to start the next recording, meaning the camera is always ready for the next shot.

Operators can also review their latest take immediately, with a simple press of the 'Return (RET)' button. If a take is not good, it can be easily deleted from the disc before moving onto the retake. This way, you not only save disc space, but you can also prepare a disc that contains only your OK takes, boosting the efficiency of subsequent editing processes.

### Reliable, Durable and Re-usable Medium

Optical discs have a natural advantage over tape media since they suffer no mechanical contact during recording or playback, making the format ideal for continuous use and re-use. Professional optical discs are also highly resistant to dust, shock and scratches as they are packaged in an extremely durable and dust-resistant cartridge. They are resistant to heat and humidity, and are X-ray resistant - factors that make the professional optical disc ideal for use in harsh field environments, and also allow for long media life and long-term storage.

### High Transfer Rate

The data transfer rate of the professional optical disc's is 72 Mb/s from the single optical head unit of the camcorder and mobile unit and 144 Mb/s on a dual head studio deck, providing stable recording and playback of high bit rate data such as a 50 Mb/s MPEG IMX stream.

*(Continued Opposite)*

*(Continued from page 20)*

### Quick Random Access

Due to the nonlinear nature of the professional optical disc, tremendous benefits are gained when handling audio/video content. When a recording is played back from the disc, its physical location on the disc does not impact the time required to access it. Recordings can be accessed in a fraction of the equivalent time taken to access information on tape, making it much easier and faster to locate source material.

With all Sony PDW Series products, a thumbnail is automatically generated to represent each recording made. These thumbnails allow for instant access and playback of clips.

Rapid access to the thumbnail feature allows for the generation and display of these thumbnails on either their LCD displays or a connected monitor. Cueing up the desired scene is simply a matter of choosing the appropriate thumbnail and confirming your selection. The recording associated with that thumbnail is then instantly brought up to the full screen size, and material can be played, paused, fast-forwarded, fast-reversed or scrubbed within the clip. This is an extremely useful feature for rapid access to footage needing to be reviewed on the camcorder, or for searching for material during editing.

## PROXY DATA - CREATING NEW POSSIBILITIES

A major benefit of the Optical Disc products comes from the seamless provision of proxy data in the acquisition process. This is a technique that effectively streamlines the entire production process in many different ways.

### What is Proxy AV Data?

In brief, proxy AV data is a low-resolution, MPEG-4 based version of the full-resolution MPEG IMX/DVCAM stream. When a recording is made, a proxy AV stream that is time code synchronized with the full-resolution stream is also recorded automatically on the disc. This proxy AV data, which is smaller in size, is easier to work with and can be transferred over common networks at much greater speeds.

Proxy AV data is highly effective for tasks where video and sound quality are of less concern, but content delivery speed is essential. The typical benefits of its use include 'Remote Content Browsing' and 'Proxy Editing'.

### Remote Content Browsing

One use for proxy AV data is to allow people to browse the content from remote locations. The MPEG-4 proxy AV data can be viewed on standard PCs. Since optical disc camcorders (with an optional PCMCIA LAN card) and decks allow proxy AV data to be transferred through their LAN ports, material shot in the field can be uploaded to a designated server for remote viewing from the studio.

This capability allows journalists in the studio, for example, to start writing scripts before the optical disc even arrives.

### Proxy Editing'

Proxy editing is a workflow innovation that breaks down the traditional barriers dictating where and when editing tasks can be performed. It offers extremely speedy but cost-effective off-line editing to both the field and the studio, streamlining each step in the editing process.

In proxy editing, the smaller proxy AV data is used for 'work material'. The smaller data size allows you to use a laptop-based nonlinear editor plus enabling extremely high-speed transfers from the disc media to the nonlinear editor - significantly reducing the required upload time.

By using Sony's XPRI MobileStation, designed for off-line proxy editing in the field, proxy AV data can be transferred to its hard drives at an incredible 30-times normal playback speed.

Its studio counterpart, the XPRI MetaStation, also allows proxy editing and 50-times speed transfers (for the dual head studio deck), plus high-resolution MPEG IMX/DVCAM editing, and forms an efficient off-line/on-line switchable system.

Once off-line proxy editing is completed on either the XPRI MobileStation or XPRI MetaStation, the EDL can be written back to the optical disc containing the original high-resolution material.

The timeline produced from off-line edits by the XPRI MobileStation is immediately reproduced on the XPRI MetaStation by simply loading the EDL and the proxy AV data. When the optical disc arrives from the field the XPRI MetaStation loads the high resolution source material and so the final on-line version of the timeline can be instantly ready for final retouching.

<< <<
Sony's PDW1500 XDCAM studio deck.

>> >>
Disc-powered, Sony's PDW510 camcorder.

### Choosing material for transfer to editing process

Selecting material to be transferred over a network or for digitising to a nonlinear editor and/or server used to be a time consuming task. Now this is simplified by using a unique scene selection function where it is possible to play out only those clips selected by the operator, enhancing the efficiency of the transfer or uploading tasks by ignoring unnecessary clips so they are not played out.

What's more, because optical discs allow for random access, clips are played out continuously - a distinct advantage over tape media, where each recording must be cued

*(Continued on page 22)*

*(Continued from page 21)*

up in a linear fashion. Unlike commonly used logging software products, scene selection requires no additional hardware or software, as the process is accomplished within the camcorder or deck itself.

Because the optical disc products use a random access media you can play out clips in the order you selected. This means you can easily generate storyboards. If required, clips can be rearranged or inserted into the sequence. In addition, deck models offer the additional ability to trim clips.

## FLEXIBLE METADATA RECORDING

Optical disc products are capable of recording a variety of metadata, providing a huge advantage when searching for data in subsequent processes. Users have the flexibility to determine the amount of metadata they wish to record by deciding how much is allocated to recording video and audio data.

The examples of the metadata types that optical disc products can handle and record are listed below.

### UMID

UMID (Unique Material IDentifier) is an approved SMPTE standard (SMPTE-330M) that consists of a globally unique number and a material number that is used for the identification of recorded material.

The UMID is automatically generated and recorded to the disc whenever a recording is made on an optical disc camcorder or deck. Sony optical disc products also support Extended UMID functionality that includes information about the time and location of the shoot.

### Essence Mark Recording

Another very useful form of metadata is the use of essence marks in Sony optical disc products. These provide a most effective way of searching for recordings via thumbnail pictures.

Essence marks can be set during the shoot either manually or automatically. Thumbnails representing the essence mark positions are generated each time the essence marks are accessed.

### Manual Marking

Each time the return button on the camcorder lens is pressed, an essence mark is set. After the shoot, operators can quickly cue to that point simply by selecting its thumbnail from a list displayed on the LCD screen of the playback device or a video monitor connected to it.

### Automatic Marking

Optical disc camcorders can also automatically set an essence mark whenever preset particular events occur. For example, the camcorder can be set up to record essence marks when the audio level overshoots, or when there is an abrupt change in video luminance levels. Similarly, the camcorder can automatically set an essence mark when the colour conversion filter is changed or when white balance is re-adjusted.

Since several different types of essence marks can exist on disc, Sony optical disc products offer an easy way of searching through them by type. Operators can choose to display only the thumbnails of those created manually, those indicating luminance changes, those made during audio overshoots, or those indicating white balance re-adjustments.

## APPLICATION

In pulling together all of these benefits and features of Optical Disc recording media, particularly for field acquisition, Sony has sought to listen to the voice of the customer in bringing products to the market that enhance and simplify the all-important task of getting product to air.

### IT-friendly System

First and foremost, in the Sony optical disc products, recordings are made as data files - one for each video or audio clip. This allows material to be handled with great flexibility in an IT-based networked environment. These files are easily available for copying, transferring, sharing and archiving to other IT-based devices.

This file-based recording system also allows material to be viewed directly on a PC linked to the optical disc decks or camcorders via an i.LINK (SBP2) connection - in the same way a PC reads files on an external drive.

The optical disc camcorders and decks come equipped with IT-friendly, computer-based interfaces. These are the IEEE 1394 i.LINK interface, supporting AV/C and SBP2 protocols, and the 1000Base-T and/or 100Base-TX Ethernet interfaces (optional PCMCIA card on camcorders). These interfaces together with the devices' MXF file transfer capability, makes integrating optical disc products into a network a quick, straightforward task.

### High Durability and Reliability

Secondly, in harsh working environments, it is of critical importance that hardware is tolerant to shock and vibration during important shoots. Sony's accumulated knowledge about the tough criteria for such environments, together with years of experience meeting these criteria, contribute greatly to the high reliability of Sony optical disc products.

The optical disc camcorder features a maximum 70 rotations per second while recording on discs with a track pitch of .32 microns. The laser beam is focused through the lens to record data on the disc while a space roughly the width of two human hairs, or approximately 150 microns, separates the laser from the disc surface.

Even when the camcorder receives a major external shock, the lens-supporting pickup is designed in such a way as to ensure perfect lens-spot focus is maintained.

The servo specially designed for this camcorder acts to detect the distance between the lens and disc surface as well as the position of the lens spot and ensures accurate positioning at all times.

The Sony optical disc camcorders use rubber dampers to hold the disc drive block in place thereby minimizing the effect of any shock or vibration.

The instant the camcorder receives a shock that exceeds the servo's capacity, causing the head to be positioned incorrectly, the servo ensures the pickup pulls away from the disc to prevent the lens from damaging the disc surface. At that instant, optical disc recording is temporarily suspended. However, the camera continues shooting while storing the visual data in its buffer memory. The buffer serves in such a way that recording to the disc will not occur until the optical head returns to its correct position. After the head is properly positioned, the buffered information is recorded to the disc, thereby helping to prevent interruptions in the recording. A substantial amount of buffering has been built into the camcorder to accommodate large off-track errors.

To minimize errors caused by dust entering the disc drive, the optical disc camcorders have the disc drive entrance concealed by two lids which helps to prevent any dust entering the drive.

In addition, in the event of an abnormal recording, powerful ECC (Error Correction Code) and sophisticated concealment techniques are available on all machines so that discs can be played back appropriately.

### MPEG IMX/DVCAM Format Recording

Sony Optical Disc products offer the capability to record and play back both MPEG IMX and DVCAM streams. Users have the flexibility to select from these formats according to their picture-quality needs, or to match their editing-format requirements.

The DVCAM format uses 8-bit digital component recording with a 5:1 compression ratio and a sampling rate of 4:

*(Continued Opposite)*

*(Continued from page 22)*

2:0 (for PAL). The MPEG IMX format uses 8-bit digital component recording with MPEG-2 4:2:2P@ML compression at 50, 40, 30 Mb/s, enabling users to choose the picture quality and recording time according to their needs.

The professional optical disc system provides approximately 85 minutes of DVCAM recording time, and 75, 57, and 45 minutes of MPEG IMX recording at 30, 40, and 50 Mb/s, respectively.

### Seamless Integration into Current VTR-Based Systems

In order to achieve seamless integration into current tape-based systems, a great deal of thought has been put into the development of Sony optical disc products. A range of conventional AV interfaces including SDI, analogue component and analogue/digital audio I/Os allows easy connectivity to current equipment, including a wide variety of VTRs, linear and nonlinear editors, and audio mixers.

Sony optical disc camcorders come equipped with both an analogue composite output and the i.LINK (IEEE1394) interface. By adding the appropriate optional plug-in board, SDI output and analogue composite input also become available. The ability to install these boards within the camcorder chassis eliminates the need for an external camera adaptor unit, thus maintaining the compactness and balance of the camcorder.

In addition, optical disc products offer network-based interoperability with other Sony network-capable equipment, such as the MPEG IMX e-VTR, establishing a highly effective and advanced system. And, because operability is another key concern when investing in new equipment, Sony has paid special attention to this too, allowing operation that is best suited to optical media while retaining the feel of conventional VTR-based products.

### Easy and Low-cost Maintenance

From the outset, Sony optical disc products have been designed using the best concurrent engineering practices, answering maintenance issues before they even arise.

Moving parts have been minimized, as have the number of parts requiring periodic replacement. This results in a drastic reduction in maintenance labour, and promotes more efficient use of your equipment.

Sony optical disc products are also compatible with Sony remote maintenance and monitoring software - an SNMP-compliant application that can monitor and log the hardware's status in real time via a TCP/IP network. If a malfunction is detected, this system can immediately identify the problem, allowing you to take corrective action. Not only is the system reactive, it proactively monitors your systems and identifies maintenance needs in a timely manner too.

## CONCLUSION

Sony's new optical disc products capitalise on the benefits of current broadcast and IT technologies to bring the convenience, flexibility and connectivity of IT based products into the familiar look and feel of current broadcast acquisition. To be freed from the linear world of tape based products and launched out into the possibilities of non-linear capture at a realistic price per gigabyte of storage opens up new areas of shooting footage. To be able to choose the ìformatî and thus the recording time per disc gives the camera operator a great deal of latitude in what they choose to shoot and what quality they want in the end product.

The ability for people in the field to send back material in the form of proxy data via IT infrastructure adds to the flexibility. To then use that proxy data to generate an EDL in readiness for the full resolution material speeds up the process of getting that story to air. For the journalist to be able to view the proxy AV material so they can get the story written ready for it all to come together the moment the optical disc comes through the door is an invaluable feature.

Optical Disc recording is here with a range of features and benefits that can change the way we work. Turn around times and workflows can be radically altered so that material goes to air more rapidly but better. It makes the saying ìmore haste less speedî a reality.

## COMMENT

By Ted Rayment, ACS

**I HAVE** been asked to respond to the above white paper from a film person's perspective.

To a cinematographer it is 'just another camera' or maybe I should say 'yet another camera'. This may seem a bold statement so let me clarify it. These days we are asked to work with a variety of different cameras depending on the job at hand. It may well be 35mm one day and Mini DV the next or any of the formats in between. We are then forced to work within the parameters and limitations of that particular camera or system to achieve the required end result.

On the surface the XD CAM would appear to be a logical progression from the existing tape systems, particularly in the area of news and current affairs, where expediency and portability is the criteria both in image acquisition and post production. Without personally testing the camera I cannot comment on its quality or ease of use. At this stage I can only speculate on its niche market, if indeed there is one. One does have to wonder, however, if there is viability for yet another system in a relatively small market such as Australia. For example does XD CAM make SX redundant? If it is a quantum leap from conventional tape, what other systems are now shortly to become redundant and can the industry sustain such rapid redundancies?

I ask these questions because I think they need to be addressed. I don't profess to even hazard a guess at the answer but I feel that, as a cinematographer, the question "What would I buy?" is a very vexing one. In the electronic acquisition arena it appears that what I buy today may well be 'out of date' by tomorrow and will I be able to keep up?

Is the optical disc and the Sony XD CAM the beginning of another big leap forward? Will we be able to replay an XD CAM disc in fifty years time in a compatible machine? I can still shoot perfectly good pictures on a thirty year old film camera that will deliver me better quality than High Definition video. I can accept the fact that electronic cameras and reusable recording mediums may well be the way of the future but from a film person's perspective it is nice to be a bit of a luddite when one system retains the same hardware but builds better 'software' to go in it while the other system constantly changes both. With one system we only need to archive the 'software'. The other requires us to archive the hardware as well.

Having said that if I was setting off tomorrow on a documentary or current affairs shoot then the XD CAM may well be just the way to go.

# That's a Rap!

## Phil Sandberg talks to **Judd Overton.**

**IN 2002,** after 10 years working primarily as clapper loader then focus puller on TVC's, TV drama and some of Australia's most widely acclaimed feature films, Judd Overton followed his passion to become a cinematographer. Judd got the opportunity to attend the Australian Film Television and Radio School (AFTRS) and during the two year Master of Arts course, worked on a wide range of short Dramas, documentaries and experimental film projects. Judd's first project at AFTRS, the documentary *Supervention* earned him a gold award for cinematography from the ACS. His film *Street Level* opened the Inaugural Hip Hop film festival in Melbourne and Sydney.

*First Job in the Industry:* My first Industry job was Production Runner on an Australian/US co-Production *Ebbtide* shot by Steve Arnold in 1993. From there, I made my way through television news in Adelaide to Art Department on a series, *Glad Wrags,* and got my first real break in the camera department on the feature *Dance Me to My Song by Rolf de Heer.*

**Favourite Equipment and Why:** I'm quite used to Arriflex which is my preference due to familiarity, although I've recently found myself playing with the Aaton A-minima and a Moviecam and can't wait to get my hands a Panaflex (when the project and budget suit).

**Gear on My Shopping List:** I guess I just go for the right gear for the job ...

**Someone should invent a ... :** A tilt-adjustable matte box, where the front filter can tilt to off-set the flare from candles and car headlights, I hate that (or if it's been invented tell me where to hire).

**Where My Talents Lie and Why:** I try to understand the mood of the piece and apply my talents accordingly, I try to be open to each new project and learn from every collaboration.

**Favourite production:** So far, my first feature, *Left Ear,* would have to be the one as I'm three weeks from shooting and it's occupying a lot of my thoughts.

**Plusses of the Job:** Constantly changing set of challenges, surroundings and interaction with the world.

**Minusses of the Job:** Long hours and distance from loved ones.

**The Local Industry Needs:** Work. More Australian content equals more opportunities.

**Future Ambitions:** Having left film school last year I'm focused on renewing my industry contacts and developing new relationships. I aim to keep working in the commercial, film and television industry and invest my time in new and challenging projects.

Judd Overton can be contacted via judd@fusemail.com

# Varicam Gains Ground in Asia

**AT SYDNEY'S** Fox Studios recently to promote Panasonic's Varicam variable frame-rate digital camera were (from left) Panasonic's Manager of Asia-Pacific sales and marketing, Toshiki Ise , reknowned Japanese DOP Zensho Sakamoto and the "father" of the Varicam, Panasonic's Katsuyuki Taguchi.

During a two-day forum hosted by Rexel Video Systems, the trio highlighted how the economies of the tape-based Varicam has seen it embraced by an increasing number of East Asian productions, including *The Choice of Hercules* (Japan); *Destiny* (HD Feature), *After School,* and *Frontline* (HD Series) from Singapore; *Ultraman Millennium* and *Garuda* from Thailand.

The producers of *Garuda,* Thailand's first feature shot in HD, say the Varicam reduced the number of shooting days over film from 60 to 40. With 250 CG shots, the use of the Varicam eliminated the need for film scanning and kine transfer. In all, the producers claim costs were reduced from AUD$25 million to $17 million over film.

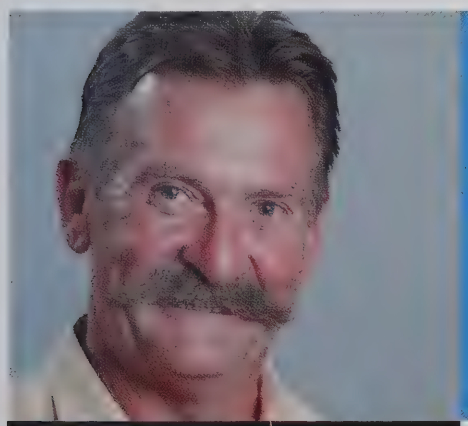
# The Effects of Ambience

By Phil Sandberg

**FORMERLY** General Manager of Kotij and a founder of Omnicon Digital, Peter Davies was recently appointed Head Producer with the Ambience Group.

The company also recently formed Ambience Concept, a new production joint venture with Michael Boughen (formerly of Southern Star Endemol) and Bryan Lowe's Harbourside Pictures which will focus on light entertainment, reality and game shows.

Ambience Entertainment's post-production division specialises in the production of live-action commercials with visual effects and CGI components, producing an average of 18 commercial campaigns a year. Ambience also undertakes broadcast design and recently provided branding for Malaysian satellite broadcaster Astro.



>> >>
**Ambience Group Head Producer, Peter Davies.**

> "The client got lost in the 1980s, we were technologists more than anything. We bought the equipment and then looked at the market. Now we do the opposite."

As well, Ambience has developed a range of predominantly 3D animated TV series that are sold to an international market.

"I don't think we are a post facility only," says Davies. "What we do here is actually produce. Rather than focus on the technology as we used to in the past as a way of marketing ourselves, we market the creative excellence in the building.

"As far as Ambience is concerned, there has always been a big focus on the VFX side of things. In the case of broadcast design, the work they're doing now is world class."

The technology employed by that creative excellence at Ambience includes Flame, Henry Infinity, Maya and 3D Studio Max, Digital Fusion, After Effects, Combustion* and Paint* & Effect*. Redundant Compaq Servers are used for up to 0.5 Tbyte of online storage and DPS Reality for uncompressed video in/out. Other tools include networked G4 Power PC's loaded with Adobe After Effects, Photoshop, Illustrator, Quark Express and web design tools. As well, there is Avid Express and a high-speed gigabit Ethernet backbone to link everything together.

"We've refocussed more on the client than the equipment," says Davies. "The client got lost in the 1980s, we were technologists more than anything. We bought the equipment and then looked at the market. Now we do the opposite.

"If a competitor bought a Henry or a flame, we'd say you couldn't buy a Henry because they had one," says Davies. "You'd purchase these things and then go out and find the work, but the market needs to be able to supports purchases of that kind.

"Now we can investigate a market. It's like selling a programme, if you get presales for it, you can get funding for it. If we need to buy a piece of equipment then we do it."

Davies extends that thinking to the current buzz around using digital intermediates, saying the company won't be particularly pursuing that path.

"What the end user is going to be looking at is the image quality involved not the way we go about it," he says. "It's the end result that matters."

## OFFSHORE OPPORTUNITIES

Market conditions during the 1990s forced Ambience to look offshore to keep the business going. As a result, the company now has a strong profile in the US and Japan and some 85 percent of TVC and broadcast design work originates offshore.

According to Peter Davies, "The local market in Sydney is well catered for with the AAVs, Garners and the Omnilabs and, without saying we've neglected the market here, we've had to look offshore to compete, but we're now able to compete in the local market a lot better than we have in the past because we've developed the offshore revenue streams to support us.

"The amount of assistance we've had to develop offshore markets has been practically zero and we get very little tax benefit from it, but we've had to do that to keep people in work and keep the company going.

"The model that we use now for the business is a very good one. We have the capacity to change the business to suit the industry. Our model will evolve to more ably cope with the local market and to take advantage of opportunities overseas."

Davies says that while the company is looking to strengthen its position in Australia, it does recognise that there have been profound changes in the local market.

"Agencies are asking us to do more with less money," he says. "That's nothing new, but more of the work we're doing is now directly with the client.

"Traditional TVCs will always be there, but that type of marketing is certainly not the powerhouse it once was. Clients are seeing that more and more and they're looking at ways of getting there message across.

"Look at the average content on TV at the moment - auctions, gardening shows, renovations. A company will sponsor a segment in the gardening show. It's getting back to Graham Kennedy taking 30 seconds out to talk about soap powder.

"I'm still a huge advocate of 30 seconds TVCs, but they cost a lot of money to do well and if clients can find another way they will."

# FIST PAST THE POST

Screening on the ABC later this year, *Double the Fist* is an Australian-produced comedy programme that makes extensive use of visual effects technology. Phil Sandberg, spoke to DTF's Doug Bayne, the man with his hand stuck in the render engine.

**C+T: What's the premise behind Double the Fist?**

**Bayne:** "Steve Foxx, self styled lifestyle guru, sends his team out to smash weakness and make the world a more 'fistworthy' place - usually by hurting themselves.

"We're aiming for a mix between extreme sports show, *Roadrunner* cartoon and *the Goodies*. So it's slapstick at heart, I guess."

**C+T: How did the show come about?**

**Bayne:** "The show came out of us working on *Saturday Morning Fly*, a kids' show on the ABC, where we had to produce about a dozen short segments a week. We quickly discovered the joy of quick, nasty special effects: 'cause as everyone knows, you don't need to work too hard on script if there's going to be explosions.

"There are four of us who write/direct/perform. On top of that one of the guys is in charge of editing. I'm responsible for graphics and effects. Although, you probably get the wrong idea when I say 'effects' ... we're a long, long way from *Lord of the Rings* here: we're talking about the kind of thing you can knock up in a day on a home computer."

**C+T: How important are VFX to the final product?**

**Bayne:** "It's pretty rare to have a scene without an effect or two, so I'd say they're integral. The graphic style of the show is kind of extreme sports, so there's also lots of titles and diagrams smashing into the screen as well."

**C+T: Is this the first large-scale use of VFX for an Australian comedy programme?**

**Bayne:** "Not sure. It's definitely something we're going to see more of, given how cheap and easy it is these days.

"There's some amazing effects stuff happening in short film and music video and, of course, you've got folks like the Sperig brothers producing *'Undead'* for next to nothing."

**C+T: To what extent have modern desktop systems made this possible?**

**Bayne:** "Hundred percent. We had a tiny, tiny budget, so there's no way we could have used expense-o-mat or whatever those high end systems are called."

**C+T: What degree of planning goes into shooting for Double the Fist? Do you make use of pre-visualisation, wire-frame mock-ups etc?**

**Bayne:** "Erm, let me just emphasise how low-end we are here. The general ethos with the effects is that it doesn't have to look terribly convincing, as long as it gets the message across.

"So, there's not much pre-planning. We just kind of hope for the best on the day. If an effect really doesn't come together in post, we'll just try and put together an alternative somehow, or cut around it. Re-shooting does happen occasionally, but only in the direst of emergencies."

**C+T: How much time is spent editing/rendering as opposed to actual shooting?**

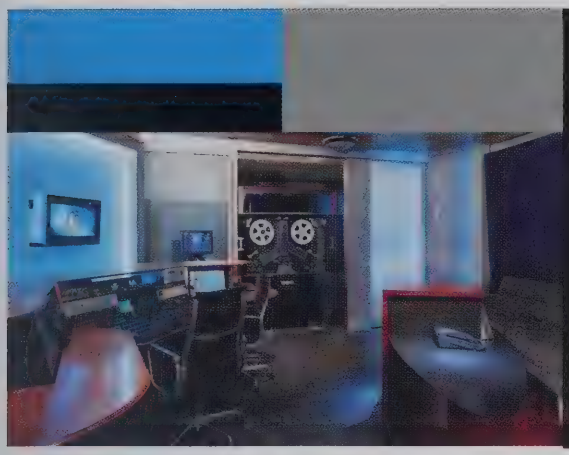
**Bayne:** "We aim for a week shooting, four weeks post to make a half hour. In practice, though, the post always goes overtime."

**C+T: Technology used on the show and why:**

**Bayne:** "We shoot on mini DV, edit on Final Cut, do the effects in After Effects and 3DS Max. Oh, and Particle Illusion, which is an excellent program you get online. There's nothing you can't hide under a big puff of smoke."

**C+T: What's funnier - Double the Fist or Funniest Home Videos?**

**Bayne:** "Kids falling over is always going to be the funniest thing imaginable. There's just no way we can compete with that."



# Frame, Set & Match Goes for Second Millennium

**FSM** has taken delivery of its second High Definition Millennium telecine. It is four years since the company moved to its Northbridge premises and installed the first Millennium. The second machine will service growing demand for HD production and replace a Y-Front telecine.

The first job in the new room is *Son of the Mask* for US film company, New Line Cinema.

The work requires transferring over 1.2 million feet of 35mm film to a range of formats including HD Cam, D-VHS, DVD and SP. The new D-VHS from JVC will be used on a daily basis to screen high definition rushes, an increasingly common procedure used in the USA for feature film work.

*Son of the Mask* follows other sequel, *Anaconda 2*, which used a similar process and is continuing to be edited in Sydney before conforming the HD tapes for audience screenings.

FSM has also been awarded the post-production on the final telemovies for *Farscape*. The original four-year production ceased work in December 2002, and Sydney-based filming of the conclusion to the successful science fiction series commenced in December 2003.

According to FSM MD Rick Schweikert, "While television commercials continue to dominate the work we do, it's the long form productions that give the business diversity and allow for very strict production techniques to be developed. This is a huge benefit to all our staff, and ultimately to clients."

FSM has invested over $10,000,000 since relocating to Northbridge and continues to expand its resources and services to the advertising and wider production community. This year promises more expansion, including 2D and 3D design, visual effects, and a second flame suite.

# Media 100 Ships 844/X Version 3

**MEDIA** 100 has announced first customer shipment of the "Visual Effects" release – new Version 3 software for 844/X. This upgrade is the largest software expansion of 844/X since its inception in 2002 and advances 844/X with new capabilities, including:

- An advanced, real-time high-precision keyer;
- Real-time 3D digital video effects (DVEs);
- Real-time shadow and glow effects;
- Up to 60-fold faster long-form/high layer-count editing;
- XML-based metadata interchange.

According to Media 100, most of the Version 3 feature set was driven by user input. In addition, many of the new features leverage the architectural flexibility of the company's GenesisEngine, allowing reconfiguration of multiple parallel-processing pipelines to perform complex keying and visual effects operations in real time.

*Reach Adimex on +61-(0)2-9699 1088 or visit www.adimex.com.au*

# Discreet Announces lustre 2

**DISCREET** has revealed details of its lustre 2 system, the next version of its real-time colour grading system for digital media and digital intermediate (DI) workflows. Developed with partner Colorfront, lustre 2 introduces new capabilities to digital colour correction by means of Discreet's advanced GMask vector shape system, designed to simulate the way light interacts with objects more realistically. In the real world light does not illuminate objects uniformly but abruptly casts shadows in some areas while softly fading in others. GMasks offers colourists more accurate control of light and colour when grading a digital image, compared to traditional methods that apply uniform fading in all directions.

The lustre 2 system will also feature an innovative, real-time, 3D colour look-up-table (LUT) engine enabling filmmakers to manipulate digital images with greater confidence and precision than was previously possible. These 3D LUTS can be used to visualise how a digital image will look when it is printed back to film and projected in a cinema. lustre 2's open engine allows simple integration of new colour management technologies, such as the Eastman Kodak Company's monitor calibration and film-look preview system, and the ARRI Colour Management System (CMS).

To provide film studios and post-production facilities with more options and price points, lustre 2 will also be available in a variety of configurations. The lustre 2 system's scalable options include:

* the lustre Master Station—a high-performance, all-in-one solution for digital grading with combined data, HDTV and dual-link HSDL capabilities;
* the lustre Command Station—a lower cost digital grading solution available in either data-only, data/HDTV or data/HDTV/HSDL configurations;
* the lustre Assistant Station—designed to support the Master and Command Stations by undertaking tasks that do not require the direct intervention or supervision of the colourist or director of photography;
* lustre Background Render Nodes—designed to accelerate the time to completion of complex look-creation and design tasks;
* lustre Conform—cost-effective software with which post houses can conform and revise digital intermediates from standard EDLs and Change Lists.

*Visit www.discreet.com/lustre or contact Discreet Australia on +61-(0)2-9844 8030 or email dave.demmocks@discreet.com*

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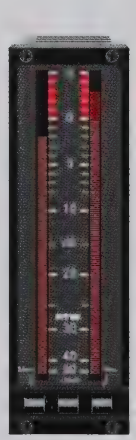

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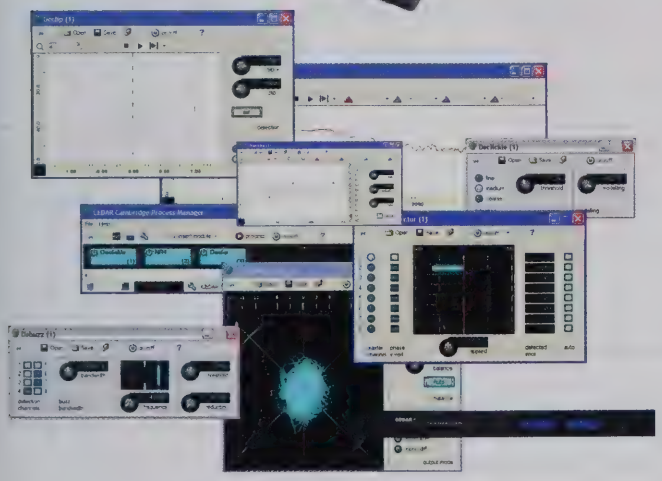

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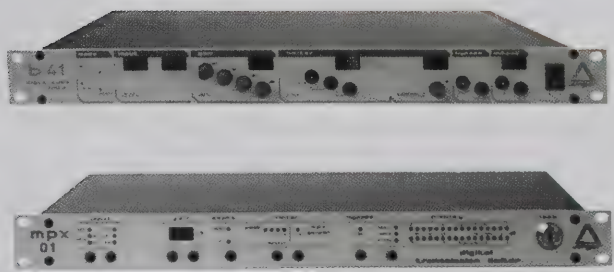

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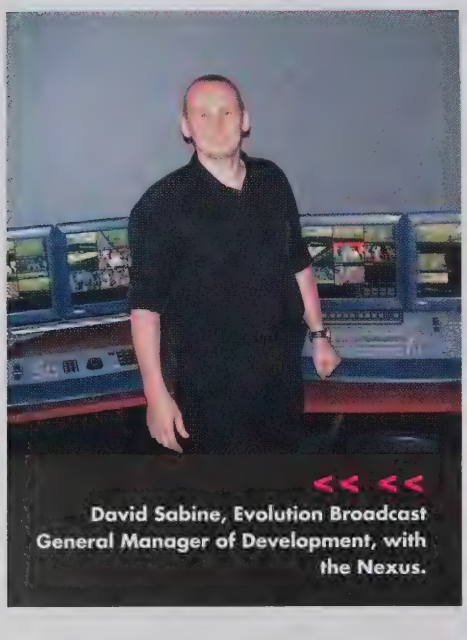

<< <<
David Sabine, Evolution Broadcast General Manager of Development, with the Nexus.

Earlier this year, Sydney-based technology developer Evolution Broadcast subjected its Nexus production control system to trials with international sportscaster ESPN at the Australian Open tennis in Melbourne.

Using touchscreen technology and Thomson Grass Valley protocols, the system is comprised of:

* Nexus Display - Evolution-developed electronics which enable the user-configurable display of up to 16 high-resolution scaled video images on a single LCD screen.

* Nexus Engineer - a module that integrates the diagnostic monitoring of all system devices into a single PC-based package.

* Nexus Director - eliminates the Vision Switcher role and allows the Director to switch complex productions using two touch screens. With unique near-field split-screen vision monitoring, a custom control panel and a graphical user interface, the user controls automation features to simplify complex transitions and video effects. The automation controls other devices including the video servers, graphics and audio.

Nexus RFX (Replay & Effects) - Using disk server technology from Thomson Grass Valley, the Nexus RFX eliminates up to four videotape operators and allows a single operator to deliver packaged replays complete with effects.

*Reach Evolution Broadcast on +61-(0)2-8877 6519 or visit www.evolution.com.au*

## → GOLD FOR TELECAST IN SE ASIAN GAMES

US Company Telecast Fiber Systems, through PTC Ltd its dealer in Vietnam supplied 130 Viper II 5122 modular fiber optic systems to the recent 22nd Southeast Asian (SEA) Games. Telecast's Viper II systems were installed at more than 36 different venues to help capture the games in their entirety, including opening and closing ceremonies and competition in 32 categories.

This was the first time that Vietnam has hosted the SEA Games, which currently include participants from Brunei, Cambodia, East Timor, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam. Competition included sports such as aquatics, billiards, boxing, canoeing, chess, fencing, judo, soccer, table tennis, traditional boat racing, and volleyball.

The Viper II systems were used to establish video, audio, and data connections between production crews stationed at the many SEA Games events.

The 5122 modules used during the SEA Games transmitted all analog video and audio signals, plus a data channel and GPI switch closure for control applications, on single fiber optic cable. The modules support both PAL and NTSC video formats and provide up to 10 MHz of video bandwidth.

Eight-channel audio inputs were digitized using 24-bit sampling, multiplexed with the video signal, and transmitted via Telecast's proprietary fiber technology. Once the signals reached the intended destination, the 5122 receivers converted the signals back into their original analog audio and video channels. Telecast offers the 5122 systems as rack-mountable or throwdown configurations.

## → PIXELMETRIX UPGRADES

Singapore-based Pixelmetrix has announced a new line of modules which add ASI Output of the demodulated transport stream to its DVStation-Remote and DVStation-Pod RF analysis modules.

Version 4.3 expands support for third party routers for both ASI and RF round robin monitoring. Added to the existing line up of router support is Model 4430 8x1 ASI Router by Ensemble Designs and Model CGRF 200 4x1 RF Router by Robit.

Also upgraded is the company's DVStor for MPEG-TS (Transport Stream) recording and playback. Equipped with two MPEG-ASI interfaces, the DVStor can record up to 1 Terabyte of MPEG-2 Transport Stream and simultaneously play back.

V2.0 of DVStor has been released with new features, including:

* DVD-RW Burner Support to allow transfer of recorded transport stream files to DVD for archive or vendor complaint and troubleshooting.

* Continuous Loop Playback allowing users to select and continuously playout a recorded transport stream segment.

* File Playout allowing users to copy or upload any arbitrary TS files to the DVStor for accurate playout from the ASI port. Allows playout of DVStation files on DVStor.

* Recording Scheduler – Daily scheduler for ASI recording allows only certain user-definable time periods to be recorded eg. record only from 9.00am-10am and 6.00pm to 7.00pm.

*Reach Pixelmetrix on +65 65474935 or visit www.pixelmetrix.com*

*For Australia, call Techtel on +61-(0)2-9906 1488. In NZ, call Cobalt Technologies on +64-9-413 9070.*

## → NOISE MEASUREMENTS WITH EFA

EFA NoiseDiagram is software for displaying BER as a function of C/N. For fully automatic measurement of the bit error ratio (BER) as a function of the channel noise (C/N), Rohde&Schwarz has developed this software that makes it easy to control the TV Test Receiver R&S EFA from a PC. The software outputs the BER values at different points (before or after error correction, FEC) and graphically displays them. The noise generator in the R&S EFA is used to set the C/N value. All conversions between C/N and SNR are performed automatically by the software and displayed in the form of a double scale (C/N and SNR or S/N) if desired. The measurement time is automatically adapted as a function of the measured BER.

*Reach Rohde & Schwarz Australia on +61-(0)2-8845 4112 or email Simon.Haynes@rsaus.rohde-schwarz.com*

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## → QUARTZ UPGRADES QMC MASTER CONTROL SYSTEM

UK company Quartz has added a wide range of new capabilities to its growing QMC range of master control switchers.

The new audio sidecar feature allows third party control surfaces to be connected to QMC control panels and integrated into the QMC control system. The "side-car" fader panel provides tactile control for audio levels and transitions as well as on-air control of key and logo layers. Operators can control audio levels directly from several motorized faders. A wide range of analogue functions can be assigned to any fader, and switches can also be assigned to any function using the intuitive QMCSetup configuration software.

New transition capabilities allow audio and video transitions to be split and run independently at any time, under manual or automated control, with optional wipe transitions available on new systems.

In large multi-channel systems, the new "Markets" feature allows selection of channels into named groups, which can be controlled, dynamically selected and modified, all under manual or automated control.

This simplifies operation of systems which transmit common program streams with regional commercial breakouts.

The new software is available at no charge to all QMC users. Customers should contact Quartz before upgrading to confirm which features are available on existing systems.

*Contact Gencom Technology in Australia on +61-(0)2-9888 8208.*
*For New Zealand Call +64-(0)9-415 6490.*
*For Singapore Call +65-6745 7442.*
*Visit www.gencom.co.nz on the internet.*

## → DVI-TO-ANALOGUE AND SDI VIDEO ENCODERS

*Reach Quinto Communications on +61-(0)3-9558 9377 or visit www.quinto.com.au*

## → AUDIO EMBEDDER/ DE-EMBEDDER

Crystal Vision's Tandem-110 is dual audio embedder/de-embedder which can adjust the level of the audio being embedded into or extracted from the SDI.

Channels can be adjusted individually across a range of -42dB to +18dB. Tandem-110 can also perform stereo to mono conversion.

When de-embedding digital audio, the Tandem-110 can continue to produce a valid AES stream (with digital silence) if the selected audio group or SDI stream disappears. Under these circumstances the AES output can be locked to the digital output piggyback's AES reference input.

The Tandem-110 can be configured as a single embedder, single de-embedder, dual embedder, dual de-embedder or mixed embedder/de-embedder.

Piggybacks are fitted to the 100mm x 266mm Tandem motherboard to provide the audio inputs or outputs, allowing the embedding or de-embedding of analogue or digital audio. An on board audio router allows the swapping of audio tracks, while each half of Tandem-110 has a built-in adjustable audio delay of up to 681 milliseconds which will compensate for any audio processing, such as a video feed going through an ARC, a DVE or being converted to and from MPEG.

Compatible with Dolby E, Tandem-110 has audio error masking, as well as a Toolbox Analyser to investigate the state of audio and other data embedded within a video signal. A stereo analogue audio monitoring output can be used to preview any of the sources. Control options include Crystal Vision's Statesman PC software.

*Reach Mastatek Pty Ltd on +61-(0)2-9144 4990 or visit www.mastatek.com.au*

## → PORTABLE MPEG-2 TESTING

Tektronix has announced its MPEG Test Systems are now available in a new portable form.

The new Tektronix AD953A MPEG Test System includes an integrated high-resolution display, making it easy and convenient to move the test system from lab to lab or offsite for commissioning tests.

The new test system also incorporates a high performance processor for greatly increased deferred time analysis speeds. A range of options provides various interfaces and additional analysis capabilities that meet most applications.

The AD953A provides play and record capability as well as both real and deferred time MPEG analysis and multiplexing capability to enable easy creation of new transport streams. Options include carousel analysis and generation for testing interactive TV systems. The new AD953A replaces the former AD952, AD953, and AD960 test systems.

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an ingest solution that not only gave you frame accurate digitizing but allowed you to simultaneously create media in multiple formats, in real-time. In a single pass from live video you get MPEG, Windows Media, and uncompressed video all at the same time, all at the highest possible quality and with complete frame accuracy.

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StreamZ real-time encoding solutions are delivered as rack mount server chassis with dual Intel Xeon processors, multiple Gigabit network ports, Ultra-320 SCSI with room for up to 6 drives, USB, and serial I/O (RS-422 included). StreamZ real-time ingest servers come standard as dual channel configurations which means you can digitize media twice as fast and each advanced video processing channel features motion adaptive de-interlacing, inverse telecine, and motion adaptive 3D noise reduction allowing you to restore poor quality video signals and optimize high quality signals resulting in higher quality, higher resolution media for the most efficient use of your available storage.

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## → ABBEY ROAD GETS AUSSIE CALIBRATION

Based in Sydney, the principals of DEQX Pty Ltd, including CEO Kim Ryrie, have a three-decade history in digital audio innovation. DEQX Calibrated technology is the result of more than five years of R&D, culminating in the company's initial product release, the PDC-2.6 Digital Calibration Processor and Crossover.

The DEQX Calibrated process provides proprietary DSP correction for every driver in a speaker system, delivering matched phase response/time alignment and flat frequency response - typically within 1dB.

The DEQX Calibrated PDC-2.6 also offers linear phase zero-distortion digital stereo 2 or 3-way crossovers with very high order slopes (up to 300dB per octave).

'Fine tuning' features include multiple bands of real-time digital parametric EQ, further per-speaker time alignment (delay), and individual driver level tuning.

The PDC-2.6 employs dual 32-bit floating-point SHARC DSPs, providing 240-MFLOPS of processing power. Stereo inputs are both digital S/PDIF and AES/EBU. Balanced and unbalanced analog inputs are sampled with low jitter, 96kHz/24-bit A/D's.

Audiophile-grade Burr Brown op-amps are employed throughout, and analog outputs are from six low jitter Analog Devices new generation 192kHz/24-bit D/A converters. Balanced analog outputs or digital outputs are optionally available.

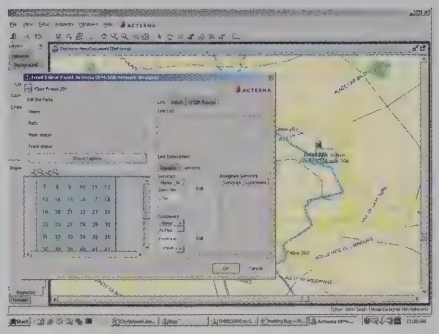
Multiple PDC-2.6 processors may be linked together, catering for any of today's surround formats.

With recent installations including London's Abbey Road Studios, benefits of DEQX Calibrated technology in a loudspeaker system include:

- Improved dispersion and wider sweet spot.
- Improved imaging and sound-staging.
- Improved frequency response and realism.
- Improved power handling.
- Reduced crossover distortion.

*Reach DEQX Pty Ltd on +61-(0)2-9905 6277 or visit www.deqx.com*

## → OPTICAL FIBER MAPPING SOFTWARE



Designed for operators looking for a network management solution, Acterna Optical Fiber Mapping (OFM) software allows managers to retrieve, cross-reference, and share information among multiple users. Providing a bird's eye view of the network and information on demand, Acterna's OFM software delivers an inside look at the outside plant and can hone in on the exact location of faults, outages, affected nodes, and customer sites, as well as shed light on the entire fiber optic network. Users from different divisions within an organisation can also generate customized reports.

Residing on a PC or laptop, this automated mapping, facilities management, and geographic information system (AM/FM/GIS) application consolidates data entered manually or through other applications. All fibre optic network documentation including fibre route maps, distribution panel graphics, OTDR traces, and PMD and CD measurements can be easily retrieved, cross-referenced, and shared among multiple users. Network operators have access to all of their networks' geographic and functional components and can track, document, and monitor an unlimited number of circuit wavelengths for each physical fibre path while O&M staff can initiate queries from any physical point in the network, including the field.

*Reach Acterna on +61-(0)3-9410 9498 or visit www.acterna.com*

## → OPERATIONAL BROADCAST MONITORING SYSTEM

Encoda Systems Automation Division has announced availability of the Operational Broadcast Monitoring System for identifying possible failures and errors on transport streams in a multi-channel transmission or distribution network such as those found in cable head-ends or direct-to-home broadcast operations.

It combines visual display of a series of transport streams on multiple screen displays, automatic verification and exception monitoring with tools to enable errors to be rapidly identified on any transport stream. The system is modular enabling users to 'pick and mix' the modules.

Encoda's Operational Broadcast Monitoring System allows monitoring across the whole system, or down to individual components, as required. It routes visible and audible exception alarms to the operators' workstations. While primarily a standalone system it can be used with Encoda's D-Series Automation Solution, allowing integration of play-out equipment alarms and status.

Operational Broadcast Monitoring Systems components include:

* Transport stream sample - provides a visual overview of the outgoing services. * Transport stream analysis - a diagnostic tool that displays all services within a specific transport stream.

* Service Path Analysis feature which enables detailed monitoring of a specific service at key stages such as pre-mux, post mux, post conditional access (CA) and off-air. In addition, consumer set-top boxes can be integrated to check on EPG, sub-titling, signing, and audio description.

* Broadcast Alarms Manager provides a focal point for network alarms with links to the visual monitoring applications.

* Uni-Poll delivers automated cyclical monitoring through channels of the outgoing transport streams – removing the need for dedicated hardware to each transport stream.

* Encoda Verifiers are remote controlled monitoring equipment that automates individual service level signal verification and trips alarms on the Broadcast Alarms Manager at the control room. Specifically, the application looks for such factors as video sync, black or frozen screens and loss of sound.

*Reach Encoda Systems on +61-(0)2-9975 9747 or visit www.encodasystems.com*

## → HD-SDI/SD-SDI MULTICHANNEL AUDIO MONITOR

Wohler Technologies has announced a new multi-channel rack-mounted audio monitor and converter featuring Dual Mode HD/SD-SDI inputs. The AMP2-S8MDA provides two SDI inputs on BNCs which can accept either a HD-SDI or an SD-SDI input.

The AMP2-S8MDA features eight tri-color LED bargraphs providing professional level metering, front panel group and channel selection with an intuitive user interface and Wohler's AMP series self powered speaker system. The unit also provides powerful demuxing capabilities with eight channels of analog and AES audio out demuxed from the HD/SD-SDI inputs.

*Reach E-Frame Technologies on +61-(0)2-9764 5911 or visit www.e-frame.com.au*

# Digital Audio Within Your Reach

## Max Air

Finally a live broadcast all-digital audio mixing console packed with features at the right price.

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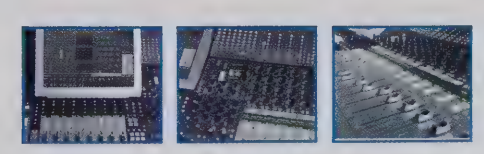

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Euphonix

# Flaunting Convention, NAB 2004

To help you get past the slot machine, C+T presents some of what's hot at this year's US National Association of Broadcasters convention in Las Vegas (April 17-22).

**APRIL 17-18**

DIGITAL CINEMA SUMMIT

The NAB2004 Digital Cinema Summit is a two-day event scheduled for April 17 and 18 at the Las Vegas Convention Center. The Saturday program, produced in partnership with SMPTE, will cover the Science, Engineering, Testing, Standards, Economic, Regulatory, and Political issues surrounding the implementation of Digital Cinema. On Sunday, NAB2004 has joined forces with the Entertainment Technology Center at University of Southern California (ETC-USC) to present a program that will provide directors, producers, cinematographers, post-production and visual effects professionals and manufacturers of digital filmmaking equipment with a comprehensive analysis of the creative and technical possibilities enabled by digital tools in production and post-production.

**APRIL 19**

HEWLETT-PACKARD CEO & CTO

Carly Fiorina, chair and chief executive officer of Hewlett-Packard Company, will deliver the All-Industry Opening keynote address at NAB2004. That afternoon, Shane Robison, HP's chief strategy and technology officer, will address attendees at the NAB2004 super session, "New Media Visions for the Future."

THE HIGH-DEF DESKTOP

10:45AM - 12:00PM

Las Vegas Convention Center S219

Join executives from Adobe, Microsoft, and Matrox as they guide you through the myths and realities of desktop HD production. Producers from companies like The Orphanage and Edgeworx will join them discussing real-life workflows and the challenges faced by creators in the trenches.

NEW MEDIA VISIONS FOR THE FUTURE

2:00PM - 6:00PM

Las Vegas Convention Center S219

This session focuses on the visionary perspectives of a few of the largest companies immersed in the world of new media - Cisco, HP and IBM are meeting the challenge to create a world where digital tools and applications are readily available for the creation of digital media.

BROADBAND AND THE FUTURE OF DIGITAL MEDIA

3:30PM - 5:00PM

Content creators, aggregators, and distributors are all looking at new ways to understand the needs of the consumer, create new compelling content, and get it through the creation process and to the consumer quickly and securely. Join key industry thought leaders to get a high-level perspective on how this can happen.

WHERE CONTENT AND BUSINESS SYSTEMS MEET: USING DIGITAL TECHNOLOGY TO CREATE VALUE

5:30PM - 6:30PM

Learn through industry examples how new digital technologies in storage and distribution combined with evolving integration of digital content into business operations are changing the face of business. Gail Whipple, Vice President of IBM Global Services for Digital Media, will focus on lessons to be learnt from implementations worldwide where companies have been highly visionary in their digital media evolution. Followed by the New Media Reception in Room S224

**APRIL 20**

MICHAEL POWELL FOR BREAKFAST

ABC News anchor Sam Donaldson will interview FCC Chairman Michael K. Powell in a one-on-one setting for the FCC Chairman's Breakfast, on Tuesday April 20.

Powell was sworn in as a member of the Commission in 1997. He was designated chairman by President Bush in 2001.

NEXT GENERATION ADVERTISING

10:30AM - 12:00PM

Las Vegas Convention Center S219

This session discusses the possibilities offered in a cross-platform world. Sponsorship, advertainment, product placement and direct marketing can be mixed and matched with traditional and targeted spots, Video On Demand, PVRs, DVDs, wireless devices and the web. The session opens up with examples and case studies of successful marketing campaigns.

NEW TECHNOLOGIES FOR DIGITAL MEDIA

2:15PM - 4:00PM

Las Vegas Convention Center S219

Here you will find a high-level discussion

*(Continued page 38)*

# Big Guns Drawn for Las Vegas

It's another big year for three of the biggest at this year's NAB.

## PANASONIC

**Booth No.C3811**
**www.panasonic.com/broadcast/**

Panasonic's P2 AJ-PCD10 card drive.

Panasonic will be showcasing its DVCPRO P2 Series with DVCPRO P2 series solid-state memory products that form the IT-based Electronic News Gathering (ING) system.

The first products in the new DVCPRO P2 series are the AJ-SPX800 2/3" camera, the AJ-SPD850 studio recorder, the AJ-PCD10 card drive, and AJ-P2C004 4GB and the AJ-P2C002 2GB cards.

The AJ-SPX800 camera combines a high performance 2/3-inch 3-CCD camera with 24fps/30fps progressive and 60 fields interlace DVCPRO and DVCPRO50 format P2 card recording.

With no moving parts, the AJ-SDX800 features three 2/3", 520,000-pixel, IT CCDs; with a sensitivity of F13 at 2000 lux; and minimum illumination of 0.09 lux (at +48dB), or 0.01 lux (at +48dB plus with +20dB Digital Super Gain). It is also equipped with a 12-axis matrix colour correction system, and gamma curves specially optimized for the demands of field news acquisition. For audio, the camera supports two or four 48kHz/16-bit PCM audio channels. The AJ-SPX800 features five PC card-sized P2 card slots, providing up to 80 minutes record capacity at DVCPRO resolution with 4G P2 cards. At DVCPRO50 studio quality, the AJ-SPX800 provides up to 40 minutes record capacity on five 4G P2 cards.

A sixth PC card slot is provided to accept a range of IT communications options, such as wireless LAN card or MPEG-4 Proxy Video Encoder. Proxy video and audio may be recorded to P2 card and SD Memory card, and subsequently viewed on a journalist's personal digital assistant (PDA), while IEEE 802.11 wireless protocols provide a path for GSM cellular phone or other wireless internet media delivery. The camera features USB 2.0, and optional IEEE-1394 interface for connection to laptop computers running NLE applications.

Other products on the Panasonic booth will include: the AJ-SDC905 DVCPRO50 camcorder with IEEE 1394 for broadcast and production; Panasonic AJ-SDC615 IEEE 1394-equipped DVCPRO camcorder; Panasonic AJ-SD93 "Universal SDTV" Feeder deck with IEEE-1394; IP-based Content Delivery and Scheduling System for plasma displays; Real-time HD/SD graphics processor for on-air broadcasting

## SONY ELECTRONICS

**Booth No.SU11051 & SL2769K**
**bssc.sel.sony.com/Professional**

New Sony HD POV camera.

Unveiled a recent press conference in Japan, Sony will again adopt the theme of "Work Smart, Work Sony" for NAB with a sub-theme of "Ride the HD Wave". The booth will feature:

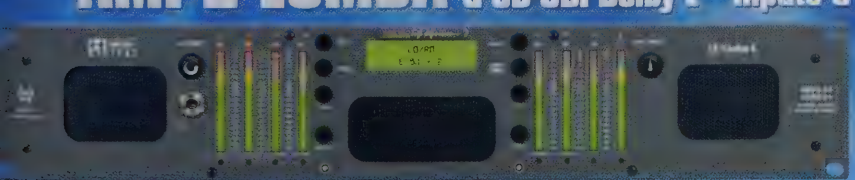
* a "Hot Products" area

* a Professional Services area with remote diagnostics and monitoring in the form of SystemWatch, MMStation and ISR Proxy

**(Continued page 40)**

NEW AMP2-E8MDA Dolby E® Audio Monitor with Embedded HD-SDI & SD-SDI Dolby E® Inputs & Discreet Outputs

call E-Frame Technologies, Wohler's dealer in Australia at +61-2-9764-5911
http://www.e-frame.com.au



- Inputs:
  -HD-SDI or SD-SDI with Embedded Dolby E or Dolby Digital Audio
  -HD-SDI or SD-SDI with Embedded AES/EBU Audio
  -Dolby E or Dolby Digital Audio
  -AES/EBU and Analog Audio
- Internal Dolby (R) E Decoder
- Simultaneous output of decoded Dolby E Bitstreams

DUAL MODE HD-SDI + SD-SDI high definition

Dolby E PARTNER

See Wohler at NAB in Las Vegas, April 19 to 22, Stand C6742-Central Hall

www.wohler.com sales@wohler.com Toll-Free (US) 1-888-5-WOHLER (INT.)+1-650-589-5676

Wohler World Leader in Rack Audio & Video Monitoring

*(Continued from page 36)*

of how new digital media technologies are being developed, what's driving their development, and what effects these developments will have on the creation and distribution of content in the years to come.

**APRIL 21**

ON-DEMAND COMPUTING FOR ENTERTAINMENT AND BROADCASTING
10:45AM - 12:00PM
Las Vegas Convention Center S219
This session will explore how broadcasters, content creators, game developers and others in the media value network are becoming more productive; implementing flexible and resilient approaches that can more effectively respond to business and consumer market turns.

THE BUSINESS OF STREAMING MEDIA
2:00PM - 3:00PM
Las Vegas Convention Center S219
This session focuses on how organizations of all sizes are using streaming media to improve efficiencies, foster new customer and consumer relationships, entertain, educate and inform.

**PAVILIONS**

AVID DEVELOPER COMMUNITY
The First Annual Avid Developer Community will debut at NAB2004. The ADC will showcase Avid's partnership with third-party developers. Avid's AVX, MetaSync, Digidesign and SOFTIMAGE|SDK Partner Programs allow third-party developers to extend the power of Avid solutions. Learn how to increase the functionality of your Avid system.

DIGITAL ASSET MANAGEMENT PAVILION
Booth SL2769
The Digital Asset Management Pavilion will house the DAM Theater, sponsored by Artesia Technologies, and feature exhibits, demonstrations, special speaker presentations, panels from leading companies in: Digital Asset Management, Data Backup, Storage Management, SAN, NAS, Metadata Management, and Network Storage Security. Richard Eberhart, Executive Director of the Global Society of Asset Management (G-SAM) chairs the Program Advisory Council for the Digital Asset Management Pavilion presentation area. Stop by the pavilion on Tuesday, April 20 from 4:30-6:00PM for the DAM Reception, sponsored by EMC.

INTERACTIVE TELEVISION PAVILION
Booth SU8834
The Interactive Television Alliance (ITA) will be showcasing a range of systems are optimised for next generation TV programming and distribution which require a two-way data path. Programming integration and production tools, digital advertising tracking and reporting, multi-level asset management, consumer navigation and cross-platform support will be highlighted, including the consumer experience in the digital home.

DIGITAL MEDIA THEATER
Booth SL5445
Sponsored by Microsoft, the Digital Media Theater at NAB2004 will educate audiences on the latest encoding, compression, and delivery technologies for streaming, multimedia, DVD, and digital broadcast.

The Association for International Broadcasting

Your invitation

to the third annual summit of the international broadcasting industry

**Join the world's broadcasting leaders for two days of discussion and debate on the subjects that matter most: growing audiences, developing revenues, sports broadcasting, 24 hour news, digital opportunities, technology and training.**

**With high-level participation from every continent, the third annual AIB Global Media Business Conference provides a unique briefing and networking opportunity in the fast-moving international broadcasting industry.**

AIB Global Media Business 2004

Prague, 12-13 May 2004

Agenda and registration available online at www.aib.org.uk

# Digital wireless camera systems:
# Picture perfect performance
## under any condition

Sony's new digital wireless camera systems draw on Sony's extensive experience with MPEG technology, combined with a COFDM wireless link to provide superior performance in extremely difficult environments. The lightweight WLL-CA50 transmitter docks directly with Sony broadcast camcorders for wireless ENG applications. The WLL-CA55 docks with Sony BVP series portable cameras and, when combined with the WLL-RX55 diversity receiver and MPEG decoder, effectively provides a genlockable wireless triax connection including Tally, intercom and full camera control functions.

Sony's exclusive time interleaving function, combined with variable bit rate and modulation settings optimise the transmission to suit any environment, particularly highly reflective environments where traditional analogue systems fail. Sony's new wireless camera systems offer effective solutions for anything from ENG to broadcast and OB applications.

To find out more about Sony's new digital wireless camera systems, call your local Sony representative now.

### Features:

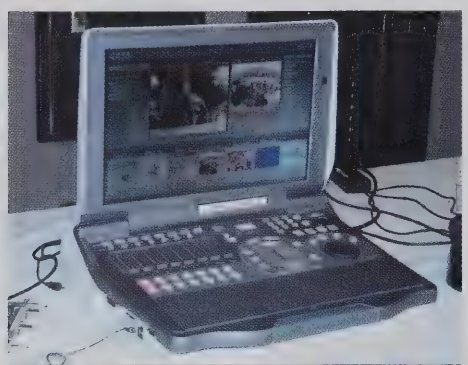
- COFDM technology: provides robust transmission, optimised for highly reflective environments
- Time interleave: allows more effective error correction, and highly stable transmission even with the camera moving at speed
- Diversity operation: Multiple antennas and receivers can be configured to provide extensive coverage for large or difficult locations
- MPEG Video and Audio Stream: High quality and variable bit rate MPEG stream with full 2 channel audio
- 10mw and 100mw power modes allowing up to 1500m transmission distance
- 2.4GHz band operation (optional 2.5GHz band available)
- Secure stream encryption, prevents unauthorised reception of the signal
- Compact, lightweight and low power consumption transmitters, designed for use with Sony camcorders and portable BVP series cameras

For further information please call **1800 017 669** or visit our website at
**www.sony.com.au/production**

Keep up with the latest from Sony and around the world, subscribe to SCAN magazine: **production.au@sony.com.au**

SONY

*(Continued from page 37)*



Sony's laptop-sized Anycast Station.

* a main theatre, including the history of HD and current developments

* Broadcast & Professional display area featuring two new Luma monitors

* Digital Signage Area with an enterprise content distribution platform, focusing on network scheduling and distribution. Plus, demos of an end-to-end solution in the digital signage area with marketing partner, Converging.

* XDCAM Area – a full family of products from acquisition to archiving, along with third party NLE integration such as Avid, Grass Valley, Pinnacle, as well as Sony Mobile and Metastation. Also on show, XDCAM products with the new optical drive.

* Advanced News Production building on Sony's Newsbase systems.

* Non-Linear Area – Complete family of NLEs, including XPRI pack with new features, as well as Vegas, Acid and Soundforge audio software.

* Live Production System Area – Live demos of switchers, routers and signal processing equipment.

* Anycast Station - New for Nab this year, the AWS-G500 Anycast Station is designed for the production of live web streams (Real Media format). Features of this All-in-One Portable Studio include: Switcher; Mixer; Display; Device Controllers; GUI; LCD screen; Camera pan/tilt/zoom controller; RGB connection for PC and Display; Built-in Line converters and Frame Synchroniser; RGB output for Projector and Plasma Display; Multi-Camera Recording; Recording input source to storage (eg. 1394 HDDs); NLE editing with handover HDDs; Built in streaming Encoder and Server.

* Storage World/DVCAM – SRW5000 in RGB 4:4:4 mode, SR Multi-channel recording unit and new DVCAM VTRs.

* Content Creation Camera Set – a comprehensive collection of HD acquisition equipment. Among 19 product releases is a new HD POV camera.

* Pro AV Area – Wireless mics and the new SRPX-500 digital AV mixer and a series of shotgun mics for Sony DVCAM cameras.

* Data Systems Solutions – Backup products such as AIT, DTF PetaSite and SAIT PetaSite.

* Recording Media – covers all Sony professional, consumer and data formats.

## THOMSON BROADCAST AND MEDIA SOLUTIONS

**Booth No.SU8076**

**www.thomsongrassvalley.com**

Thomson will showcase the TV Station in a Kit for HD Production and the TV Station in a Kit for Play to Air.

The Grass Valley TV Station in a Kit for HD Production includes two Grass Valley LDK 6000 mk II WorldCam cameras, one Grass Valley Concerto Series router, one Grass Valley Kayak HD digital switcher, one Grass Valley PVS 3000 Profile XP Media Platform with storage, as well as Grass Valley Kameleon Media Processing System modular products and control panels for the Grass Valley Newton Ethernet-based modular control system.

The Grass Valley TV Station in a Kit for Play to Air, which supports both standard-definition (SD) and HD signals, includes the new Grass Valley Maestro system for branding and master control which can be configured with a PVS 3000 Profile XP Media Platform for SD and HD storage. The compact Maestro solution supports up to four channels in a 3 RU chassis. The same frame can take care of signal conversion, insert branding, distribute signals, upconvert them to HD if desired, and play to air.

Thomson is also highlighting the addition of a new format processor to the recently launched Grass Valley Spirit 4K high-performance film scanner, providing customers with Telecine/DataCine functionality for video transfers.

With its new DataCine functionality, the Spirit 4K system now provides standard- and high-definition outputs (SD and HD) in 4:4:4 RGB and YUV formats. This functionality also includes zooming, panning, rotation, contour correction of images, and several presets for different film formats as well as a reference store with a split-screen capability.

In the camera area, a new hybrid fibre system for the Grass Valley LDK 6000 mk II WorldCam camera and a new SDI multi-core camera system.

Targeted at mobile companies, the new hybrid fibre system features a camera adapter and fibre modules for its base station. The system supports high-bandwidth HD transmission over distances of up to 4km using hybrid fibre cable (including power) with an LDK 6000 mk II WorldCam—or greater if the camera head is locally powered.

The new SDI multi-core camera system is designed for mid- and small-sized broadcasters and video professionals for use in applications from sports production and remote-controlled broadcasting environments to security and conference applications. In addition to an LDK 300 or an LDK 500 camera head equipped with IT, ITW, FT or DPM sensor, the system includes a compact multi-purpose adapter, a maximum of 100 meters of multi-core cable, a base unit, and a choice of camera control panels. This configuration enables the system to function as a standalone unit with local power. The system also supports Thomson's installed base of LDK 100 and LDK 200 users.

The company has also announced additions to its Grass Valley line of signal-management products, including digital video over fibre for the Kameleon modular products and the Trinix digital video router, and the integration of Grass Valley ViBE encoding technology into the Trinix router to enable video distribution over (IP)-based networks.

Thomson also announced new conversion modules that fit inside the Trinix frame and can switch a composite analogue source to a component digital destination.

The fibre additions announced today are part of more than 40 new modules that Thomson has added to the Kameleon line. Other modules include 17 new SD devices for signal conversion, embedded audio, multiplexing and demultiplexing, noise reduction, and audio/video –processing.

For high-definition (HD) users, Thomson announced 16 next-generation Kameleon HD modules that offer wideband 1080i and 720p video and audio processing and high-quality up- and down-conversion capabilities.

Thomson also announced a high-quality, high-density frame synchronization module for its Gecko line of discrete signal-processing products.

A complement to Thomson's M-2100 and Saturn master control systems, the new Maestro line supports standard- and high-definition (SD and HD) production.

The Maestro branding engine module enables users to add station/channel IDs and logos—with full animation and audio mixing capabilities—to any SD or HD program stream. Flexible positioning of up to four key layers, external or internal; pre-programmed digital video effects; support for up to eight audio channels; support for the M-2100 automation protocol; and support for all SD or HD formats.

Also on show, is a new Kayak HD switcher supports both 1080i and 720p HD native productions.

# Logitek Brings Large Console Flexibility

## to small workspaces

### Possible Remora Configurations

**Remora-4:** four faders with controls for input assignment, monitors and console functions

**Remora-10:** (as shown) addition of the 6-fader module brings additional mixing capability

**Remora-16 and 22:** incorporates the Remora-4 with either two or three 6-fader modules

## You don't need to settle for less when designing small on-air or production rooms.

Logitek's Remora Digital Console brings you all the flexibility of larger consoles in a very small footprint. As a control surface for our Audio Engine digital router, the Remora offers you access to all inputs and outputs on the Audio Engine, multiple mix-minus busses, dedicated talkbacks, and more. Remora consoles give you fast, convenient tabletop installation—no need for cutouts or custom furniture designs. And, its attractive full color displays plus stereo LED meters give you all the information you need at a glance.

Try the Remora as a companion to our popular Numix console or on its own. You'll soon see why Logitek's Console Router Systems make sense for your facility.

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April 17–22, 2004 · Las Vegas, NV

# Exhibitors

## The Best of the Rest

### ACCOM
**Booth No.SU8058**
**www.accom.com**

<< <<
Abekas' 6000 Production Server.

New Accom products in the edit controller, disk recorder, server and DVE product lines.

* New HDTV hardware for the Abekas 6000 Production Server, allowing mix and match of SD and HD channels in the same server with high-quality I-Frame compression for frame accurate editing in SD and HD. New features include Gigabit Ethernet option, Fibre Channel option, updated Content Management, Virtual Control Panel (VCP) for full transport control, and "Jump to Time of Day" timecode feature.

* New Axial/MX edit controller which runs on the Axial 3000 software platform. Capable of editing in all SD and HD formats including 24P. New Version 5.1 software includes 8-channel audio edit capabilities.

* Dveous/MX with Quad Twin functionality in both SD and HD. Doubles the previous dual twin capabilities and allows up to 8 channels of video or 4 video/key channel pairs. Quad twin capabilities for SD can be performed in one chassis with Quad Twin HD requiring two Dveous/MX chassis. Existing Dveous/MX systems can be upgraded.

* APR/ClipStore is Accom's new low-cost uncompressed SD recording solution, designed for on-air playback of Video+Key+Audio, and graphics applications. Over an hour of uncompressed video, key and audio recording capacity. Interfaces with networked graphics rendering computers and film printers. Comes with NetPanel browser-based user interface, and Windows Media 9 export encoding.

* Debuting WSD/HDe Universal Format Multi-Definition Digital Disk Recorder. Targeted at long-form applications such as telecine, digital film, DVD encoding, post-production, broadcast playout, stage presentation and scientific visualization.

### AURORA VIDEO SYSTEMS
**Booth No.SL5542**
**www.auroravideosys.com**

Aurora Video Systems builds comprehensive video editing systems for the Macintosh.

* New ReaktorHD uncompressed HD video product for the Macintosh. Allows users to monitor video on low-cost LD monitors while taking advantage of RT Extreme within Final Cut Pro. ReaktorHD features one HD/SDI input, two independent

HD/SDI outputs, RS422 deck control, and Composite S-Video and Component Video outputs.

* PipeSDI 10-bit uncompressed SD solution for FCP. Features one 10-bit SDI input, one 10-bit SDI output, four channels of AES audio input, four channels of AES audio output, eight channels of embedded SDI audio, RS422 device control, and a desktop monitor. For applications such as After Effects, Combustion and Photoshop.

* PipePro video capture and editing card. Allows editors to take advantage of RT Extreme capabilities within Final Cut Pro. Outputs two channels of 24-bit, 48-kHz analog audio for monitoring purposes and features four channels of

48-kHz SPDIF/AES digital audio I/O. PipePro supports up to 8 channels of 48-kHz audio embedded in the SDI inputs and outputs. Editors can view and manipulate video in applications such as Photoshop, and then preview output of the PipePro card.

* Diversity family of compact digital video converters and distribution amplifiers (DAs). All three products include a 10-bit SDI DA. The two converters feature 12-bit DACs and 12-bit ADCs compatible with NTSC and PAL SMPTE 259M 4:2:2: standards. The SDI-to-YPrPb converter includes auxiliary reclocked SDI output for connecting downstream digital devices, and Aurora's new 10-bit SDI DA provides one SDI input and four equalized SDI outputs. The system's input automatically locks to any of four SMPTE 259M data rates (143, 177, 270, and 360 Mb/s).

### BBC TECHNOLOGY
**Booth No.SU8469**
**www.bbctechnology.com**

BBC Technology will be demonstrating Internet and Media Communications solutions at NAB 2004.

Internet solutions are a combination of rich media Internet services that help the broadcast community maximise the value of its content by optimizing audience reach and user experience. US broadcasters will now have access to European audiences via multiple channels including: content acquisition, packaging and management; digital rights management (DRM) capabilities; and network distribution. The services are available on BBC Technology's highly scalable and reliable media platform based in the UK. The infrastructure manages 1.3 billion page impressions each month for BBCi, and has streamed 70 terabytes of rich media content in one month alone.

*(Continued on page 44)*

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content + technology
MAGAZINE

The Pacific region's **fastest growing in-depth Technology** Publication. **It's about business**, the changes in digital **technology** and future developments **affecting converging industries.**

## Coming Up Features in May-June

***Content***
Acquisition - Post Production, Film

***Technology***
Storage & Asset Management, Broadband & IP

***Show Coverage*** *in this issue includes* NAB Review, BroadcastAsia 2004 Preview, (distribution at the exhibition) Australian Broadcasting Authority Conference Preview

**Deadlines**

Editorial: April 9th
(late post-NAB reports to be submitted by April 30th).

Advertising: NAB bookings and Material no later than April 30th.

*Contact:*
Hugh Salmon
marketing@broadcastpapers.com

2004 features are online.

**Content + Technology Magazine Covering:**

| | | |
|---|---|---|
| Content Acquisition | Audio | Communications and IT |
| Production | Asset Management and Storage | Case Studies |
| Film | Signal Distribution | White Papers |
| Effects | Operations | New Products |
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*(Continued from page 42)*

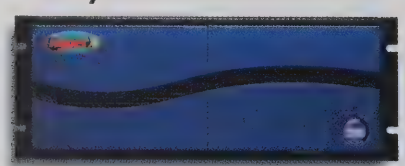
## BRICK HOUSE VIDEO
**Booth No.SU8546**
**www.brickhousevideo.com**

UK-based Brick House Video's product range includes analogue and digital switchers, time code logging equipment and VTR controllers.

* Neptune comprises two fully independent SDI framestore synchronizers in a 1RU chassis. Features 10-bit SDI inputs and a range of analogue and digital input options for flexible signal acquisition. SDI and composite analogue (monitoring) outputs are included. Can be configured as two fully independent channels or as an intelligent switch that selects the 'best' input. In dual (redundant) path applications, the dual frame architecture allows transition from failing to a good signal. Local controls for signal levels and timing adjustments are integrated along with a standard control interface for remote and automation applications. Internal test signal and source ident insertion facilities are included.

* New portable incarnation of the VTB-1D four-input VTB-1D SDI digital video switcher. New front panel, switchable program/preview composite monitoring and variable genlock timing. Available as a 1U stand-alone rack-mount version (VTB-1DC) in addition to a field unit (VTB-1DS).

## CHYRON
**Booth No.MJ0149**
**www.chyron.com**



<< <<
Hyperx, Chyron's new HD real-time CG platform.

Chyron manufactures products for the broadcast, post production and media industry - Streaming Media, Graphics and Stillstore/Clipstore DDRs.

* HYPERX - New HD real-time CG platform using next generation high-speed bus architecture with advanced 3D rendering engine technology. Coupled with Chyron's format-independent Lyric software, HyperX provides both HD or SD content creation, playout and real-time animations.

* CLYPS HD - a real-time, HD clip server with uncompressed HD video and key, in and out. Clyps HD has up to 1.3 TB of storage enabling up to 180 minutes of lower third animations or 60 minutes of full frame video. Included is an intuitive GUI with browsing and database functionality. Automation interfaces are also available, and a second channel is an option.

* C-MIX HD - a layering mixer with simultaneous SD and HD outputs. Included are four SD video and key inputs, plus a background layer, an SD mixer and an HD upcoverter. The four video and key sources can come from any device with SD outputs.

* ADVANCED LYRIC - New Lyric features include dramatically improved 3D rendering and effects and multi-channel back-to-back clips. The movie objects feature enables playback of multiple .AVI and .MOV files as animated objects within a Lyric scene. Lyric now includes asset management and browser functionality.

## COMMUNICATIONS SPECIALTIES
**Booth No.SU8065**
**www.commspecial.com**

New products from Communications Specialties include:

* Pure Digital Fibrelink 7220 Series - WXGA with Stereo Audio over one fibre

The Pure Digital Fibrelink 7220 Series is the first fibre optic link to transmit high-resolution RGB (up to WXGA) and stereo audio over one single mode or multimode fibre optic strand. Compatible with any type of display device that supports VGA, SVGA, XGA and WXGA, plus HDTV resolutions of 480p, 720p and 1080p (RGBHV format).

* Pure Digital Fibrelink® 7130 Series - provides transmission of 15 MHz wideband composite video using 10-bit video processing and four independent audio channels over a single fibre. Designed to work with either single mode or multimode fibre, the 7130 Series is compatible with all video formats, including NTSC, PAL and SECAM, and the audio channels may be used for either two channels of stereo or four independent channels. The audio channels use 24-bit sampling @ 62.5 kHz and may be configured independently by the user to have either balanced or unbalanced inputs and outputs.

## COMREX
**Booth No.N2722**
**www.comrex.com**

Comrex debuts the Studio Telephone Access Center (STAC) for listener lines, talk shows and call-in segments. STAC incorporates two digital telephone hybrids handling up to four callers. STAC is offered in six and twelve phone line versions with the ability to upgrade in the field. The accompanying control surface supports unique producer and screener configurations. IP-based call screening and control are embedded, enabling operation from virtually anywhere. Other innovative features include auto-attendant and support of up to four control surfaces.

## CRYSTAL VISION
**Booth No.C7143**
**www.crystalvision.tv**

UK company Crystal Vision will show its range of modular interface and keyers as well as new product releases for 2004.

* The SYNNER144 is a combined synchroniser, tracking audio delay and embedder/de-embedder which allows audio and video to be timed to the local syncs and embedded or de-embedded all within a single board. SYNNER144 is compatible with Dolby E and has both analogue and digital audio monitoring, as well as analogue video monitoring. The synchroniser and tracking audio delay work with two groups of audio (eight mono channels).

* The DEC105S combines a 10 bit PAL/NTSC or Y/C to SDI broadcast decoder with an SDI synchroniser. Offering both SDI and analogue inputs, it allows users to both decode a composite source and synchronise a digital source, as the board can switch between the two functions. The DEC105S, which can accept both stable and non-stable signals, is fitted with a special 'bandsplit' decoder which will give excellent decoding without the artefacts of a comb.

## da VINCI SYSTEMS
**Booth No.C9117**
**www.davsys.com**

da Vinci offers two product groups: COLOR and RESTOR. The COLOR group contains the 2K, 2K Plus, and Resolve colour enhancement systems for data, HDTV, and SDTV image enhancement. The RESTOR products include revival, revival plus, and revival for discreet for multiple-resolution and automatic image-restoration applications.

* Revival plus is an upgrade to the revival restoration system and features all the toolsets of the revival, plus colour enhancement functions and several new tools. The revival plus now includes primary colour controls, an imported session list with selected scenes, a preset "Look" library, and automated controls for white, black, lift, gain, and gamma balance. The integrated colour enhancement module includes master gain, lift, and gamma control with finer manual RGB controls. The revival plus' file system can access DPX files directly from a network or SAN. The system includes an interactive interface for stabilization and scratch removal, enabling users to stabilise sequences that include varying degrees of motion in the foreground and background. A dual-link HD video I/O will be added.

* The Resolve product family of software-

*(Continued on page 46)*

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*(Continued from page 44)*

based colour enhancement systems features Resolve FX which is network-enabled through Ethernet or Fibre Channel. Via Resolve FX, da Vinci colour enhancement processes can be applied to file-based systems such as the Discreet inferno. The system can also be configured as an offline colour enhancement system to support a 2K/2K Plus color-grading suite.

* For digital intermediate (DI) tasks, Resolve DI includes the da Vinci Powerhouse render farm or a da Vinci PCI-based hardware accelerator connected via Ethernet for real-time processing of video resolution images.

* For mastering films in 2K resolution and higher, Resolve RT integrates a da Vinci wide-bandwidth fabric to achieve real-time 2K at 24fps, 3K at 12fps, and 4K at 6fps.

* The Nucleas digital intermediate product suite consists of an ingest system, server interface, conformer, and formatter. Nucleas enables all digital intermediate functions, including colour enhancement with the 2K, 2K Plus, and Resolve systems, along with revival film restoration.

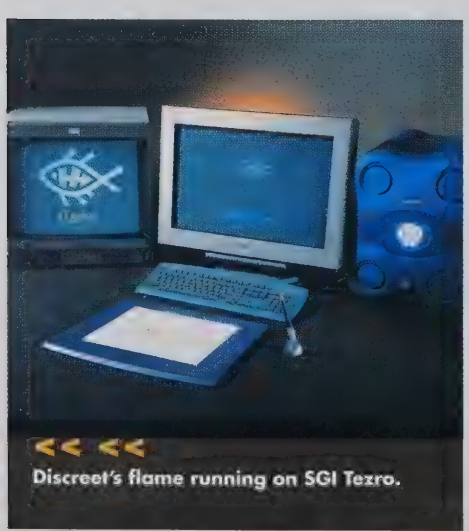
## DIGITAL RAPIDS

**Booth No.SL2466**
**www.digital-rapids.com**

Digital Rapids sells solutions for video ingest, play out, transcoding, and streaming. At NAB 2004 Digital Rapids will be showing CarbonHD - an HD product line for real-time HD acquisition, playout, and transcoding, and Copper DMG (digital media gateway), for the secure and error corrected distribution of digital media over diverse networks, supporting Windows Media 9, MPEG-2, MPEG-4, and post production formats.

## DISCREET

**Booth No.SL3547**
**www.discreet.com**



<< <<
Discreet's flame running on SGI Tezro.

Discreet will announce new versions of its inferno, flame and flint advanced visual effects systems, and showcase its latest developments for Linux-based PCs. Also showing are the latest versions of non-linear editing and finishing systems, fire and smoke, and new infrastructure solutions including technology demonstrations of Open Access – Discreet's non-proprietary collaborative workflow designed for digital data production.

Discreet's booth will feature a new Digital Intermediate film theatre with future technology demonstrations of lustre and other Discreet systems centred around high performance 2K and 4K film workflows. Discreet will also preview technology for collaborative content creation, as well as 3ds max for 3D animation, combustion for desktop graphics and effects and cleaner encoding.

## DNF CONTROLS

**Booth No.SU8965**
**www.dnfcontrols.com**

DNF Controls is a provider of hardware- and software-based control solutions for equipment used in the TV broadcast, audio/video production, post-production, and graphics markets.

* DNF's Flex Control Network uses modular, Ethernet-based, distributed control technology to deliver reliable, flexible, real-time machine control. Flex Control simplifies control between multiple control points and multiple devices, and allows operators to add and remove devices and control points as required.

* DNF will debut its new Flex Control VTR Control Module. Basic control features include record, play, stop, rewind, fast-forward, jog, shuttle, slomo, loop play and search-to-time. The new module supports control up to eight VTRs from one DNF Flex Control CP20 control panel. Control can be individual or ganged.

* DNF is also launching its new Flex Control Clip Control Module. With Clip Control, Flex Control users can load and play video clips on video servers and DDRs easily within Flex's Ethernet-based, distributed control environment. The Clip Control Module supports Odetics protocol-controlled servers and DDRs.

The following DNF products will be demonstrated in partner booths:

* ST300-EVS Slow Motion Controller for EVS maXS.

* 2MCE-24P Cuts-Only Editor, designed specifically for fast and easy-to-use, news-style, two machine cuts editing. Supports high definition 24P insert editing of video and/or audio tracks.

## ENCODA SYSTEMS

**Booth No.C5617**
**www.encodasystems.com**

* Advanced Report Management (ARM) is reporting toolkit software that enables broadcasters to take advantage of their business systems' data. Providing rapid creation of flexible, feature-rich reports tightly integrated with business applications, ARM allows companies to quickly visualise their performance and change perspective as the market moves. ARM provides a real time portal to live data, serving any PC user with immediate self-service access to an extensive array of reporting services like raw data exporting, operational extensions and graphic-rich executive intelligence. Designed to the Windows XP standard, ARM provides the elusive 'click the icon and give me the information' approach to business intelligence.

* D-Series Version 4 Automation Solution, based on open source, standards-based Linux version 2.6, an integrated open source SQL-compliant database and non-proprietary hardware technology. The new fully-digital automation system will represent one of the first commercial applications in any industry to use Linux version 2.6 – the most current and robust Linux technology available.

* Encoda is also introducing a cost effective D-Series System configuration that combines the material database, video server information system, archive interface and file transfer manager on a single platform. The D-Series system server will run on a SQL-compliant open source database application server. The new, more feature-rich DALingestClient in version 4 will allow faster, more accurate and user friendly capture and tracking of content. A new graphical user interface, designed by direct customer input, presents dub lists and ingest tasks in a highly logical and efficient workflow format.

## FAST FORWARD VIDEO

**Booth No.C2851**
**www.ffv.com**

<< <<
FFV's DigiDeck digital video recorder.

*(Continued opposite)*

*(Continued from page 46)*

Fast Forward Video, Inc. designs, manufactures, and markets digital video recorders and timecode systems.

* Based on the technology of the company's Recon DVR, the DigiDeck records to IDE hard drives and is available with composite and Y/C input/output, two channels of unbalanced audio, genlock, timecode I/O, and RS-422. The system can record up to nine hours on a single drive. Options include RGB/Component out and Windows control software. The DigiDeck DVR can be ordered as a single- or dual-channel system.

## Hamlet Video International

**Booth No.C3243**
**www.hamlet.co.uk**

Hamlet is launching the first in a new range of compact products, the Flexiscope. To meet the new challenges of the digital era, Hamlet has designed its own digital processing engine specifically for audio and video test and measurement. This combines excellent capabilities (including HD and beyond) and a flexible architecture with low power consumption, making it ideal for handheld instruments. Flexiscope, a palmtop waveform monitor with integral high quality 3.5" TFT display, is just the first of a comprehensive family of products to come from Hamlet.

## HARRIS CORPORATION

**Booth No.C1906**
**www.harris.com.**

<< <<
Harris' NetVX Networking System.

At NAB 2004 Harris Corporation Broadcast Communications Division will demonstrate new applications that allow radio and TV broadcasters to increase efficiency, manage content and implement new services.

* For TV, Harris will be showing Dataplus, a network agnostic datacasting system, Neustar DTV surround sound system which will deliver 5.1 sound, Digital Ingest and Media Ingest, both new features of the Harris Resource Suite (hrs) product and ADC-25, a scaled down version of Harris' ADC-100 automation system.

* The NetVX Networking System is enhanced for transporting video over IP networks with a new Gigabit Ethernet interface capable of high-speed file transfer and transporting 64 real-time bi-directional video services.

* Also on display will be the ReCon remote control and facility management system and Harris eCDi enhanced transmitter network monitoring and control system for Harris TV and FM radio transmitters.

* For Radio, Harris will show the ReCon Radio facilities management system, Intraplex STL HD PLUS, which enables HD audio, LAN/WAN data, telephone and intercom voice, and remote control signals to be transported over a single T1 connection, and will be distributing a DigaSystem by D.A.V.I.D. a scalable end-to-end content management system. Visitors will also see video over DAB, including a DAB Head-End with live demos of an IP tunnelling gateway and MPEG4 encoding together with a DAB receiver and video display and a DAB 660 transmitter.

## L-3 COMMUNICATIONS ELECTRON DEVICES

**Booth No.C1422**
**www.L-3com.com**

L-3 Communications Electron Devices is a supplier of microwave power devices including UHF TV transmitting tubes.

* New for NAB2004 is a modified version of L-3's Constant Efficiency Amplifier tube for use in analog transmitters to improve efficiency over standard IOTs. The new device will work in common mode with performance equal to an IOT in all respects: gain, linearity, sync compression, etc. The CEA 80 is capable of 55 percent efficiency in analog service, nearly 40 percent greater than typical IOTs.

## LOGITEK ELECTRONIC SYSTEMS

**Booth No.N3307**
**www.logitekaudio.com**

Logitek has implemented a number of enhancements to the company's digital audio routing and console systems. Features new for NAB 2004 include:

* New physical and virtual router controllers, the Route-XY and MatrixIP, for the Logitek Audio Engine;

* Full intercom capability. Logitek's intercom (available as part of the Audio Engine) offers switched and/or party line operation, director priority switching, and IFB functions;

* Also available for the Audio Engine is an Optical STL. A bidirectional fiber audio link of 64 channels each way is available, with no compression and no data loss (when compared to other digital STL products). A range of up to 10 miles is possible.

Console updates: EQ, dynamics processing, silence sense functions, a 10 second talk show delay, pre-fader input meters, compression metering, and up to 24 mix-minus busses have been added to Logitek consoles. Dedicated Guest Panels are also available.

## MILLER CAMERA SUPPORT

**Booth No.SU10536**
**www.miller.com.au**

Following the release of the SOLO DV telescoping carbon tripod, Miller will launch its 100mm ENG big brother – the SOLO VJ, at NAB 2004.

Designed for 10–40lb camcorders, SOLO VJ boasts a 1.9m (74") maximum height, and, due to its spreaderless design, goes down to a ground-hugging 22cm (8.7"). Miller SOLO tubes do not rotate when tightened, making SOLO VJ both quicker and easier to deploy.

SOLO VJ weighs only 3.1kg (6.8lb) yet offers the high torsional rigidity of standard dual tube 2-Stage tripods. Neoprene upper tube covering provides grip and weather protection, while spike/rubber feet, Air Cell carry strap and impact resistant soft case are included with each tripod.

Miller is also launching the Arrow 30, a fully featured 100mm ball levelling fluid head for 10-30lb DV/ENG camcorders. Based on the higher capacity Arrow ENG head, Arrow 30 supports the new breed of lighter ENG camcorders from PD-170 through DSR-390 to Sony's new XDCAM PVW-530.

Featuring 7+7 selectable pan/tilt drag (plus '0') Arrow 30 offers smooth feather-light or ultra-heavy resistance drag to suit all shooting conditions. Selectable 4-position tilt counterbalance and 70mm sliding platform allow for the widest range of camera, lens and battery options, while the quick release camera plate ensures high speed tripod-to-shoulder re-positioning.

## MIRANDA TECHNOLOGIES

**Booth No.SU10129**
**www.miranda.com**

At NAB2004 Miranda will launch PresStation, a compact, multichannel HD/SD master control switcher panel. The PresStation operates with Miranda's Oxtel Series Imagestore channel branding processors. PresStation can control clip playout, dual 3D-DVEs, automated character generation, and four layers of animation/clock insertion.

Also on show is the Imagestore HDTV automated master control and channel branding processor with integrated automated character generator plus Gallery

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<< <<
**Miranda's PresStation multi-channel, HD/SD master control switcher panel.**

graphics preparation and data interfacing software. The new IMM branding media management software also will launch. Imagestore HDTV is an expandable HD processor for logo, master control switching and channel branding graphics.

Miranda has expanded its Densité Series of modules. A new monitoring switching bridge feature for the Densité Series 2RU frame allows any of the inputs to one or more frames to be monitored instantly.

Enhancements will be shown of Miranda's visual/aural monitoring over IP systems. An expanded range of Densité Control Probes for digital/analog video and audio signal measurement will be debuted, along with enhancements to the IP Scope waveform and vectorscopes. The iControl Web control and monitoring software has also been strengthened with new GPI and SNMP support.

Miranda's range of electronic acquisition interfaces is expanded with the MDC-900/920 HD downconverter interfaces for Sony and Panasonic HD cameras, and the SER-900 HD serializer interface, which converts the HD parallel component signal from Sony HD-CAMs to HD-SDI.

Miranda also will be showing DVI-Ramp DVI-to-HD/SD video port, which enables workstation operators to output computer graphics as HD or SD for post or live playout.

## NEUTRIK
**Booth No.C5842**
**www.neutrikusa.com**

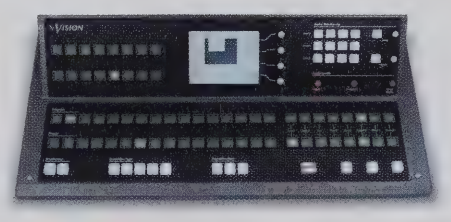
Neutrik manufactures a wide array of XLR connectors and receptacles, jacks and plugs and accessories for the professional audio industry.

Neutrik will announce the debut of the XLR Chassis Connectors "AA" series, the newest unit in Neutrik's state of the art receptacles. The "AA" series will be completely compatible with the "A" series. The "AA" series of receptacles will only be available in female versions.

The "AA" series features a larger surface contact and gold plating at the contact mating area, and will be a drop-in replacement for comparable "A" series part numbers. Compatibility includes panel cutout and PCB layout. Its low-contact resistance ensures high-contact pressure for added durability. On the "AA" series the "push" lever now comes pre-assembled.

The "AA" series will be available in 12 standard three-pin female horizontal and vertical PC mount versions only.

## NVISION
**Booth No.SU7552**
**www.nvision1.com**



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**Analog to HD, NVision's NV5128-MC switcher.**

NVISION will spotlight new and enhanced routing and distribution systems at NAB.

* HD-capable NV5128-MC Master Control/Routing Switcher - targeted at TV stations migrating from analog to SD/HD transmission.

* NV7512 Scaleable TDM Digital Audio Router - supports analog and digital audio signals, and is linearly expandable to offer 2048-by-2048 channels. MADI-format multichannel digital I/O also is featured.

* NV5128 Multiformat Router, now expandable to 128-by-128 HD signals, to fulfill I/O requirements of medium-sized facilities. Users can specify, for example, 64-squared HD and 64-squared AES digital audio signals in the same chassis.

* NV8256-Plus Expandable Large-Format Digital Video Router, now available with A-to-D and D-to-A converters.

* NV990 Router Control System, low-cost alternative to the NV9000.

## OMNEON VIDEO NETWORKS
**Booth No.SU7466**
**www.omneon.com**

Omneon Video Networks is a provider of networked media servers.

* Adding to its HD capabilities, Omneon will show enhancements to its SDTI media interface adapter (MIP 1002 MEDIAPORT) to enable support for Panasonic's compressed HD format, DVCPro-100. With this addition, the Omneon Spectrum becomes capable of supporting all leading HD formats simultaneously, including MPEG, HDCAM, and DVCPro-100.

* Omneon will introduce native support for MXF across its entire line of Omneon Spectrum media servers, giving customers the choice to select either QuickTime or MXF as the media wrapper format for material stored within an Omneon system.

* Omneon Spectrum for Production; Omneon will highlight its shared storage infrastructure for collaborative production, demonstrating enhanced edit-in-place capability for news and video editors. Working with Final Cut Pro from Apple, editors gain productivity by editing material directly on an Omneon Spectrum, making finished edits immediately ready for playout and reducing time-to-air. Omneon will also show support for browse-editing along with additional craft-editor application integration.

* Omneon Spectrum for Distribution; Omneon will show a mix of both multi-format SD and multi-format HD playback from the same server, as well as multiple configurations, from the 30-plus-channel Omneon Spectrum playout server to the new six-channel Omneon Spectrum ES remote server, connected via Gigabit Ethernet for IP-based content distribution.

* Omneon SPECTRUM for Archive; Omneon will demonstrate integrated solutions for nearline and offline storage and management of media assets.

## PESA SWITCHING SYSTEMS
**Booth No.SU9530**
**www.pesa.com**

Pesa Switching Systems is a supplier of digital and wide-bandwidth routing switchers, distribution amplifiers, signa-conversion products, and control systems.

* Premiere, Pesa's newest routing switcher, is a small expandable system available in matrix sizes based on 8x4, 12x8, 16x8, and 16x16. Premiere can handle a variety of signal types including composite, Y/C, RGB, RGBHV, and stereo audio. Future releases will include SDI, HD-SDI, and AES/EBU. Included in Premiere are RS232, USB, Ethernet, and Pesa PRC connectivity, along with Pesa Windows set-up software and a local control panel. In addition, the system is easily networked with auto-sensing configuration and can be controlled remotely on an IP network from anywhere.

* Pesa's new Clikcontrol Internet router control system operates over Ethernet via TCP/IP and uses a Windows Internet Explorer browser as the client interface. The Clikcontrol server communicates directly to the 3500PRO or Ocelot control system via RS232. By logging onto the assigned

*(Continued on page 49)*

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URL, Clikcontrol becomes an extension to the Pesa Control System from anywhere. Clikcontrol Client can be used to control several different locations.

## Pixelmetrix Corporation
**Booth No.C9146**
**www.pixelmetrix.com**

<< <<
Pixelmetrix's DVScope.

Singapore-based Pixelmetrix will show the DVScope HD/SD SDI Waveform and Vector generation, display and analysis tool boasting a unique error log/profile capability for automatic verification. Supporting all SDTV and HDTV serial digital formats, DVScope provides all the functions of an advanced SDI test and monitoring system. Other products include:

* DVScope Quality Auditor; combines testing, measurement, monitoring and reporting of both SDI baseband parameters and picture quality into a single product. Used during ingest of material, DVScope Quality Auditor provides automatic legality verification of material.

* DigiCipher II Transport Stream Processor; a DVStation monitoring platform module. It offers an all-in-one preventive monitoring solution for both direct-to-customer and back-end contribution networks using DigiCipher II based satellite links.

* Digital Program Insertion Auditor; an application that boasts a range of logging and reporting capabilities allowing operators to monitor and audit the accuracy of digital program insertion (DPI).

* QAM Transport Stream Processor & Tuner module; three versions of the QAM tuner are available to support cable standards.

* 8VSB Tuner/Demodulator and TSP; DVStation monitoring platform modules. Together they can offer an all-in-one preventive monitoring solution for ATSC DTV terrestrial broadcast networks.

## PRO-BEL
**Booth No.C8123**
**www.pro-bel.com**

Pro-Bel manufactures routing, signal processing, master control and automation equipment.

* NAB sees the full launch of Morpheus. A new automation range, Morpheus can manage anything from single channels up to the most complex multi-channel environments. The MediaBall concept introduced in Morpheus provides a uniquely powerful way of handling secondary events such as interactive TV.

* TX500 master control system with advanced automated and manual audio capabilities. The TX 500 offers solutions from a simple mixer to a multi-channel master control system with multi-level audio support for surround sound.

* Vutrix display monitors offer plasma and TFT display screens, incorporating sophisticated video scaling and processing technology.

* Major new features for Procion Router Control will be introduced at NAB, as well as the Sirius multi-format routing family.

## QUANTEL
**Booth No.C6406**
**www.quantel.com**

Quantel will be at this year's NAB showcasing the full range of its generationQ systems for DI, post, graphics and news/sports. Two years on from its debut, generationQ offers a completely scalable range of systems designed from the ground up to handle today's multi-resolution workflows. In post, generationQ scales from the desktop all the way to realtime 2k processing; in news and sports, from the smallest local broadcaster to the international provider.

NAB will also be the first time that audiences at large will be able to see Quantel's new Version 2 software, a release which takes generationQ to the next level. Featuring a host of enhancements and improvements, including even more advanced workflow ergonomics and a powerful process tree interface option, V2 will be available across the entire generationQ range.

The generationQ range on show at NAB 2004 comprises:

* Digital Intermediate; Quantel is one of the most successful suppliers of DI systems with iQ systems installed worldwide.

* Post; eQ - the resolution co-existent HD editor, designed from the ground up specifically for the multi-resolution world. For mainstream SD post, QEdit Pro is based on a Quantel-boosted PC platform.

* News/sports; Based on the IT/ broadcast bilingual sQ server with its integrated, scalable range of timeline editing applications, generationQ for news and sport is an integrated production system.

* Graphics; Quantel's super-powered gQ platform and QPaintbox Pro workstations feature power, networkability and openness.

## QUARTZ ELECTRONICS
**Booth No.SU9812**
**www.quartzuk.com**

Quartz will debut Xenon, a high performance multi-format router available in 4U (up to 64x64 total inputs and outputs per frame) and 8U (up to 128x128 total inputs and outputs per frame) sizes. Xenon supports SD and HD video, plus analog and digital audio, and is designed to accept a wide range of plug-in Signal Processing Modules. Initial modules will include channel branding, master control and Web based source monitoring.

NAB will mark the launch of the Topaz router range. Initial models include SDI, and HD-SDI, in addition to analog video and audio. The new range offers 16x16 and 32x32 sizes in each format. Topaz comes ready for standalone operation right out of the box or may be integrated into larger Quartz routing systems. Control compatibility with the main Quartz range gives Topaz users full access to the extensive range of available control panels and interfaces.

## RADIO FREQUENCY SYSTEMS (RFS)
**Booth No.C8617**
**www.rfsworld.com**

<< <<
Mt Wilson, California: RFS completes a turnkey nine channel expandable UHF system, including this broadband panel array with unique pattern tailoring capability .

RFS's NAB display will include examples of the various product elements that comprise high-power multi-channel combined UHF systems - such as a directional waveguide combiner, patch panel with optional digital monitoring capability, broadband panel and slot cavity antennas, and HELIFLEX air-dielectric coaxial transmission lines.

Complementing RFS's high-power offerings at NAB, will be a selection of products aimed at the lower power market. Foremost among these will be the company's new omni-directional 'Super-turnstile' batwing antenna, to be unveiled at the exhibition. Featuring a uniquely low profile, the fully radomed Super-turnstile antenna supports the entire UHF band (470 to 860 MHz), exhibiting superior pattern integrity across the entire frequency range.

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## SNELL & WILCOX

**Booth No.C6421**

**www.snellwilcox.com.**

Among the new Snell & Wilcox IQ Modules to be introduced at NAB 2004 are:

• IQMUX40 - HD-SDI Remultiplexer. A single solution module for all HD-SDI 1.5Gbit/s multiplexing or demultiplexing operations.

• IQSDA0 - Intelligent Reclocking High Performance HD/SD-SDI Distribution Amplifier. This HD-SDI distribution amplifier is capable of equalising up to 140m of industry standard cable.

• IQSYN20 - HD/SD-SDI Frame Synchroniser. Provides synchronisation for HD-SDI 1.5Gbits/s or SD-SDI 270 Mbits/s with "signal integrity protection" capability.

• IQSRT00 - HD/SD-SDI 5 x 2 Router. Five input router/switcher for HD-SDI 1.5 Gbit/s or SD-SDI 270 Mbits/s and wide-band signals. Also supports SD-SDI signals and combinations.

• IQSRT10 - HD/SD-SDI 8 x 2 Router. As above, but also offers direct GPI control for ultimate simplicity, true tallies and 16 cross points in just 3RU.

• IQMDA00 - HD-SDI Monitoring Distribution Amplifier. This is a distribution amplifier and monitoring downconverter for HD-SDI 1.5 Gbit/s signals.

• IQSYN00 - SD-SDI Frame Synchroniser with Embedded Audio Processing. Provides synchronization for SD-SDI 270 Mbits/s.

• IQMUX00 - Four Channel Digital Audio Embedder with Synchroniser. An SDI synchroniser and two times AES/EBU stream embedder designed as a general digital ingest module.

• IQDMX00 - Four Channel AES/EBU De-Embedder/DeMultiplexer with Synchroniser. This SDI synchroniser and four-channel AES/EBU de-embedder/de-multiplexer can extract PCM, AC-3 and Dolby E digital audio data.

## SOFTWARE GENERATION LTD

**www.sgluk.com**

SGL will demonstrate its FlashNet backup and archive management software on a number of booths at NAB2004 including:

* Asaca (booth SL4342) - FlashNet will support Asaca's new Blue Laser library technology and shared storage systems.

* Avid (booth SL4761) - Avid and SGL will show the new integrated search tools for Avid Unity and FlashNet Archives.

* BBCT (booth SU8469) - BBCT and SGL will show the fully integrated solution of BBCT's Colledia system with FlashNet software, in conjunction with Quantel.

* Blue Order (booth SU6759) - SGL and Blue Order will show a fully integrated archive and asset management system using Blue Order's MediaArchive application and FlashNet.

* IBIS (booth SU6766) - SGL and IBIS will show the fully integrated Archive Management solution that uses FlashNet as the HSM.

* Leitch (booth SU9868) - SGL will show data storage management solutions using Leitch servers and News editing systems in conjunction with Asaca and Arkemedia.

* Quantel (booth C6406/C7106) - SGL will show an integrated archive management solution using the new Quantel Archive gateway.

* Sundance Digital (booth SU7470) - SGL and Sundance will be showing integrated archive and data management solutions with various Sundance automation applications.

* Thomson Broadcast and Media Solutions (booth SU8076) - SGL and Thomson will show integrated low cost Archive Systems for News and Transmission using Thomson's Vibrint systems and Profile playout servers integrated with FlashNet.

## SOLID STATE LOGIC

**Booth No.N2412**

**www.solid-state-logic.com**

Enhanced for security, SSL's C100 console.

SSL will introduce a V1.5 software upgrade for the C100 Digital Broadcast Console. Two new security features enhance the operation of the console and provide robust system redundancy for live broadcast operations.

Broadcast security is further enhanced by the C100's Control Surface Management. Using a simple graphical interface, the operator is able to reconfigure the control surface without audio interruption.

A new Remote Bay option allows the console processing to be split across two control surfaces, providing additional flexibility in situations with restricted space, or where two distinct control sections are required.

Enhanced networking and integration capabilities, including Third Party Router Integration, allow information interchange between an external router and the console's built-in digital router.

## SUNDANCE DIGITAL

**Booth No.SU7470**

**www.SundanceDigital.com**

Sundance Digital will feature a suite of new products and upgrades.

* Pathfire Content Manager, Sundance Digital's interface to the Pathfire delivery system. The Sundance Content Manager interfaces with Pathfire's Automation Connect gateway to manage the transfer of new media from Pathfire's cache server to the facility's transmission server. The program also updates the Sundance media database with the metadata available from Pathfire including frame accurate segment timings. Available as an option for Titan, FastBreak Spot Play and FastBreak Automation systems.

* Sundance is launching Sentinel, an SNMP monitoring package for Sundance installations. Providing a single interface to "back room" software modules, Sentinel allows users to monitor the health of various Sundance components within their systems from a single interface.

* For Titan and FastBreak Automation systems, News Recorder automates segmenting during live recording of content to the video server. Program segments may be marked via tally or GPI input using a specially configured work station. Auto-segmented clips are immediately accessible for inclusion in playlists for re-broadcast.

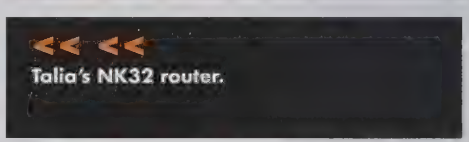
## TALIA SOUND AND VISION

**Booth No.SU11029**

**www.talia.com.au**

Talia Sound and Vision is using NAB to showcase its range of innovative Australian-designed products to the global market.

* The NK family of routers are compact



Talia's NK32 router.

and flexible, available in 16x16 and 32x32 formats. The NK range includes levels for SDI, AES/EBU, Analogue Audio and Video (including high quality versions) as well as Machine Control (RS422 Data). They are configured at the factory with standard set-up, however, with the use of the NK-IPS, more flexible configuration options are available.

The Talia NK-IPS is a device that acts as a control hub. It allows multiple remote control panels to be connected in a 'star' configuration. It also acts as a web server for the configuration and customization of

*(Continued opposite)*

*(Continued from page 50)*

the NK devices. This removes the need for router control and configuration software.

* A Virtual Control Panel is due for release at NAB to control the NK routers over an IP based network through the NK-IPS. Further, an RS-232 converter is also available for direct connection between an NK routing system and automation or other devices (using a native Talia RS-232 protocol).

* The Kondor routing system (up to 256x256x8) employs a totally passive frame. All active components are 'hot-swappable' and serviceable from the front of the router and there are options for redundancy of power supplies, CPU and matrix cards. New additions to the Kondor routing system include HD/SD dual standard input and output cards, 144x144 HD Matrix cards, AES-3id input and output cards and the incorporation of signal conversion and decoding within the Kondor router. Geneos, the control system for the Kondor router offers tie line management, path finding and resource management.

## TELECAST FIBER SYSTEMS

**Booth No.SU9824**
**www.telecast-fiber.com**

Telecast Fiber Systems is a developer of portable and fixed fibre optic systems for TV broadcast production. New Products at NAB2004 include:

* DiamondBack II Broadcast-Quality Analog Video Multiplexer. Features eight channels of broadcast-quality analog video and a ninth BNC for the coaxial output of the company's various Adders on a single fibre. A solution for signal-trunking and distance-learning applications.

* CopperHead Cine, a newly redesigned Camera-Mounted Fiber Optic Transceiver for use in digital cinematography applications. The sleek CopperHead Cine is nearly half as wide as the original, dramatically improving camera balance without sacrificing functionality. The new transceiver includes all the features of the HD/SDI CopperHead, with four additional return audio channels, for HD and 24p production.

## TELESTREAM

**Booth No.SU7183**
**www.telestream.net**

At NAB, Telestream is featuring MAPone, a media delivery application that reduces the cost and complexity of gathering news stories. MAPone improves time-to-air by enabling journalists to transmit news stories in minutes from field laptops to the station. When combined with Telestream's FlipFactory, MAPone provides all-digital delivery from laptop directly to any

<< <<
Telestream's MAPone digital news delivery system.

newsroom server or editing system. MAPone transmits from news laptop systems via any standard or wireless IP network.

## THALES BROADCAST & MULTIMEDIA

**Booth No.C4709**
**www.thales-bm.com**

Thales will be showing its DCX Paragon MSDC-IOT UHF digital transmitter, available in oil and liquid cooled versions for both NTSC and DTV operation. Comes with Soft Arc Technology (SATTM) and MSDC tubes.

Thales will also demonstrate a variety of MPEG/DTV processing solutions for terrestrial broadcast, cable, broadband, and Telco applications. ThalesCrypt, a new DTV Security Service Platform to protect contribution links, is Based on highest security scrambling mechanisms with proven cryptographic solutions.

Thales is now offering a complete broadband platform, SmartVision TVTM, to deliver TV programs, VOD and associated interactive services over DSL.

Thales will also introduce new products for economical SD/HD logo insertion in transport streams, and low cost DPI Ad insertion and monitoring. In Video Content Delivery, Thales will display a complete IP contribution system. The demonstration includes OpenStream Management System coupled with the Multicast File Transfer (MFT) Server, to optimize the scheduled transmission of video file content, and OPAL IP Encapsulator, to deliver this content over DVB network.

In the area of Radio Broadcasting will unveil new developments for its Skywave 2000 modulation platform, featuring new Cirrus DRM Multiplexer and Stratus Thales' DRM and Digital Radio Exciter.

## TSL - TV SYSTEMS LTD

**Stand No.SU8762**
**www.TVsystems.com**

TV Systems Ltd (TSL) manufactures audio monitoring units and UMD/Tally Systems.

* TSL is launching into the US market its SLS-1P self-powered rack or free standing 1RU high quality loudspeaker unit.

* TSL will also be highlighting TallyMan tally and UMD configuration system. TallyMan is highly flexible and compatible with a wide range of routers, switchers and multi viewers. Existing users of the TSL Winsoft system can upgrade to TallyMan.

* TSL will also be showing its range of AMU audio monitoring solutions including new 4-channel versions and a wider range of scales.

## VERTIGOXMEDIA

**Booth No.SL5836**
**www.vertigoxmedia.com**

VertigoXmedia products are designed to streamline the graphics production workflow by offering the ability to capture and control live data automatically, create corresponding data-driven graphics, and deliver real-time graphics to multiple output channels.

* Brand new for NAB2004, VertigoXmedia's turnkey election system comes complete with all the hardware and software required for creating dynamic graphics that keep pace with up-to-the-minute election developments. The Xmedia Election Graphics System incorporates templated broadcast graphics, an authoring station for customising graphics, editorial screens that enable journalists to preview election results using a Web browser, a control station for controlling playout of graphics, a CG graphics system, and more.

## VISTEK

**Booth No.C6106**
**www.vistek.tv**

This year's NAB will be Vistek's definitive launch into the world of High Definition.

Of particular interest will be an HD synchroniser, designed with in-coming HD line control in mind. The V6402 module includes a 2 x 1 input switch, plus a Proc Amp. It can be coupled to another new module, the V6302 Advanced Audio Processor, to provide audio de-embedding, processing and re-embedding facilities.

The V6302 itself provides channel switching, level control, re-mixing and both variable and tracking delay for up to 6 channels of AES digital audio, or 12 analogue channels. It also has provision for an on-board Dolby Digital decoder, allowing decoding of either Dolby E or Dolby Digital audio streams.

The HD line-up also includes a Down Converter, an Up Converter and a Cross Converter. Each converter can also be linked to the Advanced Audio Processor, allowing conversion to encompass audio as well as video.

# new PRODUCTS

## → LA AUDIO DIGI BOXES

Housed in aluminium cases, the new range of LA Audio DigiBoxes is made up of:

* The AES-D2 Channel divider, which takes an AES/EBU signal on an input XLR, which is always dual channel, and distributes it to two XLR's on the output. Channel A or Channel B can be selected for each output allowing A & A, B & B, and B & A (Channel A and B swapped).

* The AES – SPD, a single channel AES/EBU to S/PDIF or S/PDIF to AES/EBU converter.

* The AES - S3, an AES/EBU signal splitter with three outputs.

* The SPD-S4, an S/PDIF signal splitter with four coax outputs and three TOS-Link (optical) outputs. The input can be selected between coax or optical S/PDIF. * The CLK-G4, a Word-Clock and/or Super-Clock generator offering low clock jitter (better than 50ps). Output frequencies are switched for 44.1kHz, 48kHz, 88.2kHz and 96kHz. Four clock outputs can be switched in pairs between Word-Clock and Super-Clock.

* The CLK - C4, a Word-Clock to Super-Clock or Super-Clock to Word-Clock converter and four way distributor. The CLK - C4 automatically detects if it is receiving Word-Clock or Super-Clock and an LED lock indicator shows that the CLK-2 is locked to a incoming Word-Clock. Two pairs of outputs can be selected between Word-Clock or Super-Clock.

* The CLK - D4, a four way Word-Clock or Super-Clock distribution box. The input can be switched for either high impedance i.e. for use in a networked clocking system, or 75 ohms when connected directly to the clock source.

*Contact Technical Audio Group in Australia on +61-(0)2-9519 0900 or visit www.tag.com.au. For New Zealand, call +64-(0)9-416 0190 or visit www.tagnz.co.nz*

## → MPEG EDITING/DVD AUTHORING

Canopus has announced MPEGcraft DVD, a software application that combines MPEG editing and DVD authoring capabilities into one solution.

MPEGcraft DVD contains an MPEG editor that allows users to cut, stitch and mix MPEG-1 and MPEG-2 video clips while preserving their original video quality. MPEGcraft DVD gives users frame-accurate MPEG editing capabilities and eliminates lengthy encoding times by re-encoding only the edited segments of the video clip.

Once an MPEG sequence is edited, MPEGcraft DVD's authoring capabilities can burn directly to a disc or generate the necessary system files for future DVD authoring. With MPEGcraft DVD, users can manually insert chapter points or automatically create chapter points according to clip changes within the video. DVD titles can also be authored to repeat playback indefinitely.

MPEGcraft DVD also includes To MPEG Tool, a handy utility that provides high-quality MPEG encoding options, such as multiplexing and demuxing, for existing video files; MPEG re-encoding options, including upscaling of MPEG-1 to MPEG-2; and DV AVI-to-MPEG encoding.

*Reach Canopus at +61-(0)3-9885 5888 or visit www.canopus-aust.com*

## → FUTURE REALITY GETS HUGE & ALGOLITH

Future Reality is now distributing the Huge range of storage systems, and reselling Algolith's compositing and visual effects software plug-ins.

The Huge range includes MediaVault RAID and SANstream SAN solutions. MediaVault RAID is available in Max and Dual Max configurations with up to 2.5TB of storage to provide real time access to SD and HD material. The newest is the MediaVault 320, which can record and play back high quality video using a Single or Dual Ultra320 SCSI interface. Also available is SANstream, a combination of Gigabit Ethernet switcher, high speed server and RAID system. Digital media can be shared directly with every major OS via the 6/8/12 Gigabit Ethernet ports. SANstream also supports DHCP, DNS and NAT and connects workstations to the internet or existing networks.

Algolith provides plug-ins that perform format conversion between CG, SDTV, HDTV and film images for compositing and visual effects systems including Shake 3.0, Avid DS and Eyeon's Digital Fusion/DFX+.

Algolith's image transformation plug-ins include frame size, frame rate, scanning type and aspect ratio conversions. Plug-ins include Adaptive de-interlacing (ADI), Anti-Aliasing, (AAA), Content Adaptive Scaling (CAS) and frame rate conversion (FRC). Dynamic Noise Reduction (DNR) and MPEG Noise Reduction (MNR) plug-ins target digitally compressed images and include noise reduction and MPEG or Mosquito noise reduction techniques.

*Contact Future Reality on +61-(0)3-9870 8655 or visit www.future.com.au*

## → MEDIAPROXY, MONITOR EVERYTHING

The Australian-developed mediaproxy LogServer now comes with Enigma 4 GPIO (General Purpose input/out put) module. The GPI in/out feature allows clients to monitor and control devices outside the LogServer product scope such as; doors, pumps and fans, as well as offer complex functionality over the same network that,connects the LogServers and clients.

One of eight contact closure inputs may activate any LogServer function - start recording, change bitrate - in the same way as our existing scheduling module.

The GPI state may also be transmitted upstream to user-defined clients for monitoring back at base. To control third-party devices, simply send a command message into the LogServer network (using Hyperterminal or other front-end software), and the GPIO module will set or clear a TTL/relay output pin for use with the customer's equipment at the remote site.

*Mediaproxy can be reached on +61-(0)3-9549 1115. Visit www.mediaproxy.com*

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# ENTECH 04

## Sydney Exhibition & Convention Centre

Monday April 5 ~ Tuesday April 6 ~ Wednesday April 7

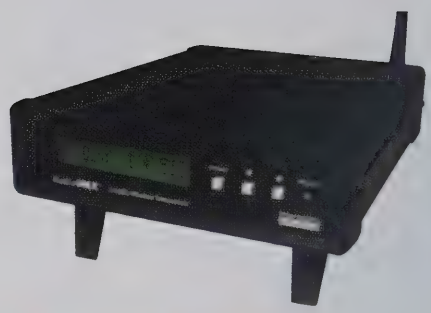
## → LCD MONITORING

PANORAMAdtv, the video division of Wohler Technologies has announced the launch of its new LCD video monitoring product. The MON8-1 contains eight 1.8" LCD screens, each one with a composite video input, a loop-through output and termination switches. It comes in a compact 1U of rack space. Despite its small screen size, the image quality is said to be surprisingly good - positioning this new product as a suitable tool for quick confidence checks on multiple video feeds.

*Reach E-Frame Technologies on +61-(0)2-9764 5911 or visit www.e-frame.com.au*

## → KODAK EXPANDS FILM PALETTE

Reach Kodak at +61-3-9333 7777 or visit www.kodak.com/go/motion



## → WIRELESS LIGHTING

Coemar De Sisti Australia is now distributing Interactive Technologies lighting control products, including the RadioDMX Wireless DMX Transceiver.

Using RadioDMX, lighting control networks can be transmitted through the air, allowing the operation of lighting instruments in locations where running conventional DMX data cables may be impractical or inconvenient. Even when getting DMX to a particular location is possible by running standard data cables, RadioDMX can get a system up and running in a fraction of the time.

Using digital spread spectrum communications technology, RadioDMX transceivers provide plug-and-play wireless DMX with exceptional range, speed and worry-free operation. A large LCD display, simple menu functions and context sensitive help screens make setup and customization easy.

*Reach Coemar De Sisti on 03 9467 8666 or e-mail: mail@cdaust.com.au*


# ABE2004 exhibition

*featuring the latest in digital broadcast & production technology*

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NewTek Sales
Quinto Communications
Rexel Video
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Tandberg Television
Techtel

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## EVENTS

**MARCH >> >>**

CCBN
(China Cable Broadcasting Network 2004)
China
23 - 25 Mar
www.ccbn.tv

APSCC WORKSHOP ON DIGITAL SATELLITE BROADCASTING
Republic of Korea
23 - 25 Mar
www.apscc.or.kr

**APRIL >> >>**

ENTECH
Darling Harbour, Sydney, Australia
05 - 07 Apr
www.conpub.com.au/entech/default.asp

ASTRA
FOX Studios, Sydney, Australia
06 - 07 April
www.astra.org.au

NAB 2004 (NATIONAL ASSOCIATION OF BROADCASTERS)
Las Vegas, USA
19 - 22 Apr
www.nab.org/conventions/nab2004

CEBIT ASIA
Shanghai, China
26 - 29 Apr
www.cebit-asia.com

**MAY >> >>**

CEBIT AUSTRALIA
Sydney
04 - 06 May
www.cebit.com.au

116th AES CONVENTION
Messe, Berlin, Germany
08 - 11 May
www.aes.org

AIB GLOBAL MEDIA CONFERENCE
Prague, Czech Republic
12 - 13 May
www.aib.org.uk

KOBA
Coex convention & Exhibition Center Seoul, Korea
19 - 22 May
www.koba.or.kr

**JUNE >> >>**

COMMUNICASIA 2004
Singapore
15 - 18 Jun
www.communicasia.com/

BROADCAST ASIA
Singapore Expo, Singapore
15 - 18 Jun
www.broadcast-asia.com


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# Off-Air

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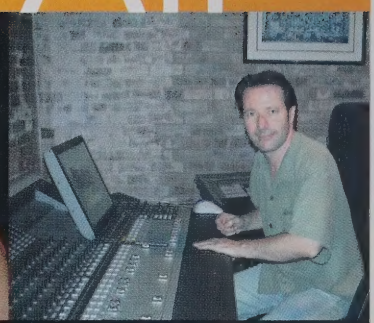
>> >> Quinto Xmas

>> >> Real Broadcast Industry Awards

>> >> TAG Xmas

>> >> Domain



>> >> TAG Xmas

>> >> Real Broadcast Industry Awards

>> >> Quinto Xmas

>> >> TAG Xmas

>> >> Domain

>> >> Blood Oath Mate!

>> >> Real Broadcast Industry Awards

>> >> Hey, daddio!

>> >> Domain

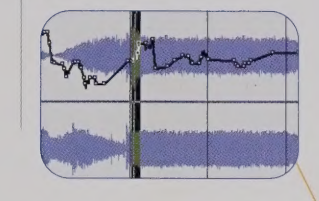
>> >> Domain

>> >> Domain

>> >> TAG Xmas

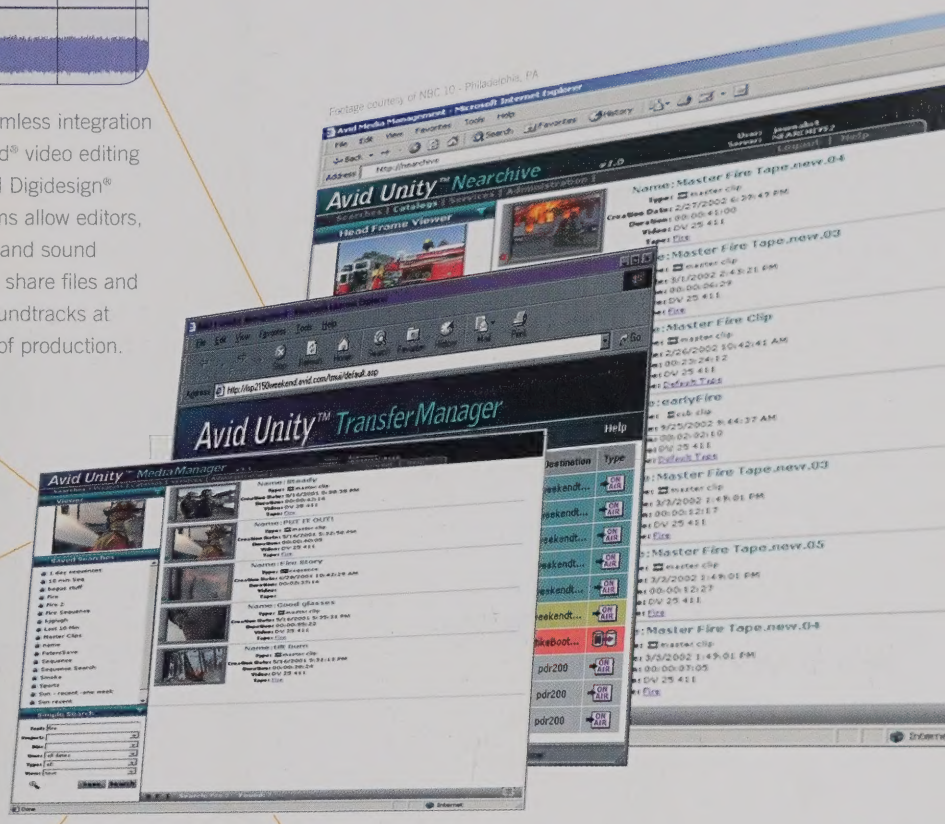
>> >> Bringing in the Sheaves

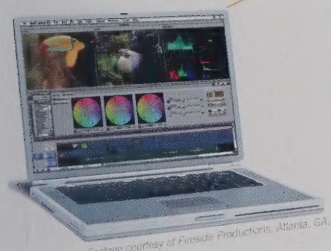
# Nobody does workflow like Avid. Nobody.



**Audio:** Seamless integration between Avid® video editing systems and Digidesign® audio systems allow editors, composers, and sound designers to share files and fine tune soundtracks at every stage of production.

**Editing:** With simultaneous access to the same project bins, media, and metadata, multiple Avid editing systems can work in parallel, accessing video, audio, and effects tracks as they are created and posted to the network.

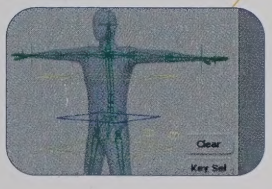


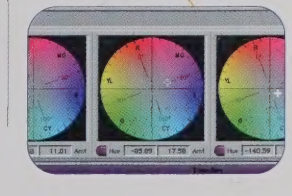
Footage courtesy of Fireside Productions, Atlanta, GA.

**Mobility:** Take the show on the road. You can create on the fly, then share projects, bins, and sequences between a remote laptop and Avid editing systems in the suite.

**Avid Unity™ Networks:** Without a network your system is a digital island. Connected to a network tuned for content creation pros, you can manage your media by individual user, assign and expand storage capacity by project, and establish security levels – all with a few mouse clicks.



**Effects + Animation:** Build complex 3D animations and create composite "previsualisations" for use in offline editing. The finished 3D components and metadata can then be accessed instantly for online finishing without rebuilding.



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